HDTV
USER'S MANUAL

HITACHI

61HDX98B

IMPORTANT

Follow all warnings and instructions marked on this projection television.

WARNING

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of a sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE
THIS PROJECTION TELEVISION TO RAIN OR MOISTURE.

NOTE:
- There are no user serviceable parts inside the television.
- Model and serial numbers are indicated on back side of the television.
- This television is not intended for use in a computer room.

CAUTION: Adjust only those controls that are covered in the instructions, as improper changes or modifications not expressly approved by HITACHI could void the user's authority to operate the TV.

POWER SOURCE

This projection television is designed to operate on 120 volts 60Hz, AC current.
Insert power cord into a 120 volt 60Hz outlet.

TO PREVENT ELECTRIC SHOCK, DO NOT USE THE TELEVISION'S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE, OR OTHER OUTLET UNLESS THE BLADES AND GROUND TERMINAL CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NEVER CONNECT THE TELEVISION TO 50HZ, DIRECT CURRENT, OR ANYTHING OTHER THAN THE SPECIFIED VOLTAGE.

NOTE: This television receiver will display television closed captioning, (CC or), in accordance with paragraph 15.119 of the FCC rules.

CAUTION: Never remove the back cover of the television as this can expose you to very high voltages and other hazards. If the television does not operate properly, unplug the television and call your authorized dealer or service shop.

IMPORTANT

FCC REGISTRATION INFORMATION

Your HDTV is registered with the Federal Communications Commission and is in compliance with parts 15B and 68, FCC Rules and Regulations.

1. Notification to the Local Telephone Company.
On the back of this equipment is a label indicating among other information, the FCC Registration number and Ringer Equivalence Number (REN) for the equipment. You must, upon request, provide this information to your telephone company.

The REN is useful to determine the number of devices you may connect to your telephone line and still have all these devices ring when your telephone number is called. In most (but not all) areas, the sum of the RENs of all devices connected to one line should not exceed 5. To be certain of the number of devices you may connect to your line as determined by the REN, you should contact your local telephone company.

Note: This equipment may not be used on coin service provided by the telephone company. Party lines are subject to state tariffs, and therefore you may not be able to use your own telephone equipment if you are on a party line. Check with your local telephone company. Notice must be given to the telephone company upon permanent disconnection of your equipment from your line.

2. Rights of the Telephone Company.
Should your equipment cause trouble on your line which may harm the telephone network, the telephone company shall, where practicable, notify you that temporary discontinuance of service may be required. Where prior notice is not practicable and the circumstances warrant such action, the telephone company may temporarily discontinue service immediately. In case of such temporary discontinuance, the telephone company must: (1) promptly notify you of such temporary discontinuance (2) afford you the opportunity to correct the situation and (3) inform you of your right to bring a complaint to the Commission pursuant to procedures set forth in Subpart E of Part 68, FCC Rules and Regulations.

The telephone company may make changes in its communications facilities, equipment, operations of procedures where such action is required in the operation of its business and not inconsistent with FCC Rules and Regulations. If these changes are expected to affect the use or performance of your telephone equipment, the telephone company must give you adequate notice, in writing, to allow you to maintain uninterrupted service.

3. Federal Communications Commission Notice
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

4. Modifications
The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi America, Ltd. Home Electronics Division may void the user's authority to operate the equipment.

IMPORTANT SAFEGUARDS

CAUTION:

- Read all of these instructions
- Save these instructions for later use.
- Follow all warnings and instructions marked on the television.

SAFETY POINTS YOU SHOULD KNOW ABOUT YOUR HITACHI PROJECTION TELEVISION

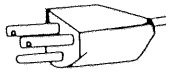
Our reputation has been built on the quality, performance, and ease of service of HITACHI televisions.

Safety is also foremost in our minds in the design of these units. To help you operate these products properly, this section illustrates safety tips which will be of benefit to you. Please read it carefully and apply the knowledge you obtain from it to the proper operation of your HITACHI television.

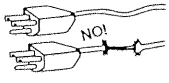
Please fill out your warranty card and mail it to HITACHI. This will enable HITACHI to notify you promptly in the improbable event that a safety problem should be discovered in your product model.

FOR YOUR PERSONAL SAFETY

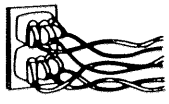
1. This television set is equipped with a three-prong grounded, alternating-current line plug. This plug will fit only three terminal receptacles. This is a safety feature. Do not defeat the safety purpose of the three terminal plug.



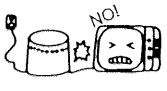
2. When the power cord or plug is damaged or frayed, unplug the television set from the wall outlet and refer servicing to qualified service personnel.



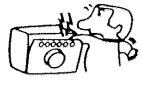
3. Do not overload wall outlets and extension cords as this can result in fire or electric shock.



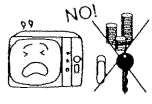
4. Do not allow anything to rest on or roll over the power cord, and do not place the television where the power cord is subject to traffic or abuse. This may result in a shock or fire hazard.



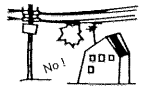
5. Do not attempt to service the television yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



6. Never push objects of any kind into the television's cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the television.



7. If the television has been dropped or the cabinet has been damaged, unplug the television from the wall outlet and refer servicing to qualified service personnel.



8. If liquid has been spilled into the television set, unplug it from the wall outlet and refer service to qualified service personnel.

9. Do not subject your television to impact of any kind. Be careful not to damage the picture tube surface.

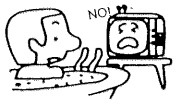
10. Unplug the television from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.

11-1. Do not place the television on an unstable cart, stand, table or other furniture item not recommended for use by the TV manufacturer. The television may fall, causing serious injury to a child or an adult, and serious damage to the appliance. Use only with a cart or stand recommended by the TV manufacturer, or sold with the television. Wall or shelf mounting should follow the Wall/Shelf mounting manufacturer's instructions, and should use a mounting kit approved by the manufacturer.

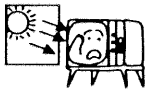
11-2. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

PROTECTION AND LOCATION OF YOUR TELEVISION

12. Do not use the television near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



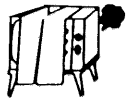
- Never expose the television to rain or water. If the set has been exposed to rain or water, unplug television from wall outlet and refer to qualified service personnel.



13. Choose a place where light (artificial or sunlight) does not shine directly on the screen.

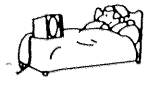
14. Avoid dusty places. Accumulated dust inside the chassis may cause failure of the television when high humidity persists.

15. The television has slots or openings in the cabinet for ventilation purposes which provide reliable operation of the receiver and protect the television from overheating. These openings must not be blocked or covered.

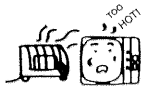


- Never cover the slots or openings with cloth or other material.

- Never block the bottom ventilation slots of the television by placing it on a bed, sofa, rug, etc.



- Never place the television near or over a radiator or heat register.



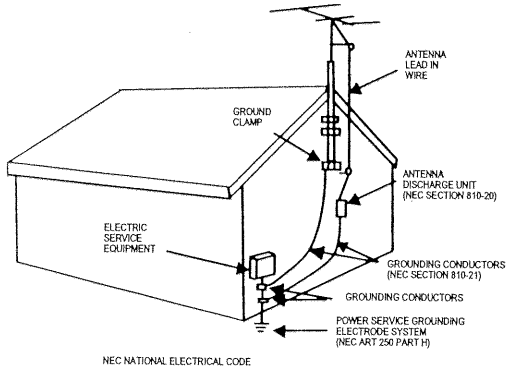
- Never place the television in a built-in enclosure unless proper ventilation is provided.

SAFETY TIPS

PROTECTION AND LOCATION OF YOUR TELEVISION

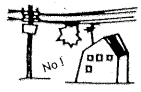
16-1. If an outside antenna is connected to the television, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, NFPA No. 70-1975, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit connection to grounding electrode, and requirements for the grounding electrode.

16-2. **Note to CATV system installer:**
(Only for television with CATV reception). This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

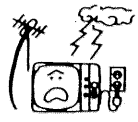

ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUNDING CONDUCTORS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250 PART H)
NEC NATIONAL ELECTRICAL CODE

EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS.

17. An outside antenna system should not be located in the vicinity of overhead power lines or other electrical lights or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

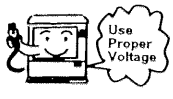


18. For added protection for the television during a lightning storm, or when it is unused for long periods of time, unplug it from the wall outlet and disconnect antenna. This will prevent damage due to lightning and power-line surges.

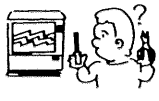


PROTECTION AND LOCATION OF YOUR TELEVISION

19. This television should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply at your home, consult your dealer or local power company. For televisions designed to operate from battery power, refer to the operating instructions.



20. If the television does not operate normally by following the operating instructions, unplug the television from the wall outlet and refer servicing to qualified service personnel. Adjust only those controls that are covered in the instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified service technician to restore the television to normal operation.



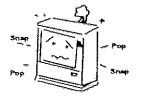
21. If your television is to remain unused for a period of time, (such as when going on a holiday), turn the television OFF and unplug it from the wall outlet.

IF THE TELEVISION DOES NOT OPERATE PROPERLY

22. If you are unable to restore normal operation by following the detailed procedure in your operating instructions, do not attempt any further adjustments. Unplug the television and call your dealer or service technician.

23. Whenever the television is damaged or fails, or if there is a distinct change in performance that indicates a need for service, unplug the television and have it checked by a qualified service technician.

24. It is normal for some televisions to make occasional snapping or popping sounds, particularly when being turned on or off. If the snapping or popping is continuous or frequent, unplug the set and consult your dealer or service technician.



FOR SERVICING AND MODIFICATION

25. Do not use attachments not recommended by the television manufacturer as they may cause hazards.

26. If replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

27. Upon completion of any service or repairs to the television, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.

PICTURE CAUTIONS

Picture Burn Prevention

- Continuous on-screen displays such as video games, stock market quotations, computer generated graphics, and other fixed (non-moving) patterns can cause permanent damage to projection television receivers. Such "PATTERN BURNS" constitute misuse and are NOT COVERED by your Hitachi Factory Warranty.

- When using Picture-in-Picture function, the sub-picture should not be left permanently in one corner of the screen or a "PATTERN BURN" may develop over a long period of time.

Public Viewing of Copyrighted Material

Public viewing of programs broadcast by TV stations and cable companies, as well as programs from other sources, may require prior authorization from the broadcaster or owner of the video program material.

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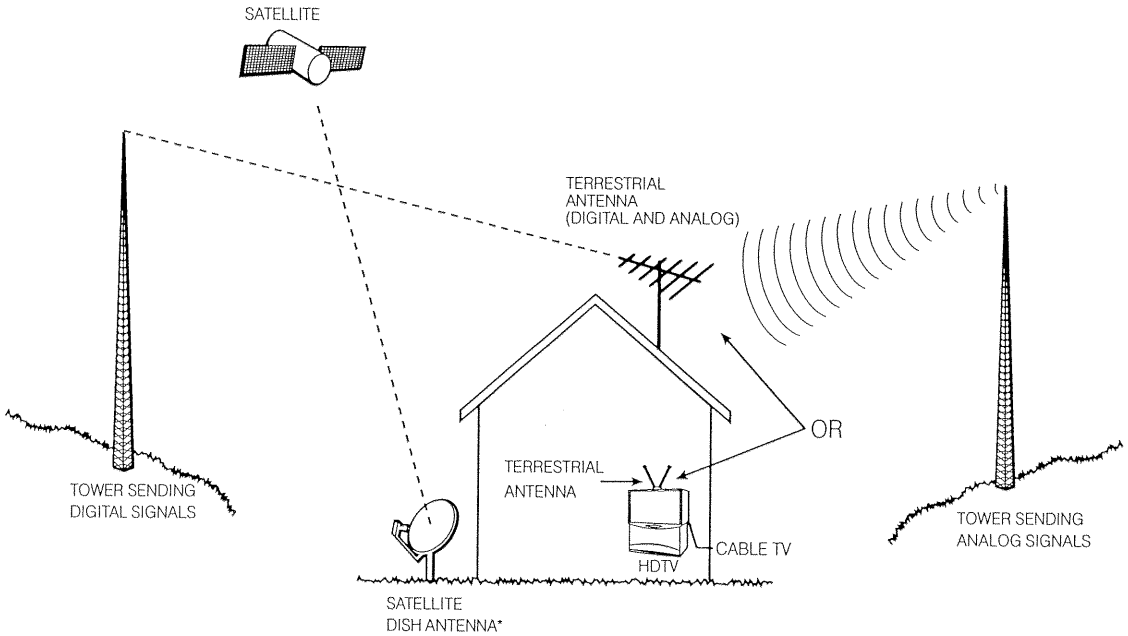
WELCOME TO HDTV

High Definition refers to a new way of sending programming information over the airwaves and into your TV. There are two types of TV display formats available. One is ATSC format, which originated from the Advanced Television Systems Committee. The other is NTSC format, which is named for the National Television Systems Committee. What makes your High Definition Television (HDTV) special is that it has tuners capable of receiving ATSC and NTSC formats as well as DIRECTV signals. You can receive: analog (in NTSC format), digital terrestrial (in ATSC format), cable (in NTSC and ATSC formats), and DIRECTV. This TV makes receiving all types of signals seamless. Below is an example of how your HDTV can receive the different types of signals.



So why is it called High Definition? Definition—commonly called resolution—refers to the sharpness of the image and is determined by the number of dots, or pixels, your screen uses to create the image. The more pixels the sharper the image. An HDTV normally has either 1080 or 720 rows and over 1,000 columns of pixels. This results in a display of over one million pixels. Your HDTV also has a wide screen, or "wide aspect ratio" of 16:9 as opposed to the common 4:3 ratio. It is normally capable of displaying both interlaced images (like today's analog TVs) and progressive images (like a computer monitor).

What this all means is that while digital broadcasting will bring many new possibilities, only people with HDTVs like yours will actually be capable of realizing many of them. A wide aspect ratio, one million pixel resolution, CD-quality audio with Dolby Digital surround sound, and improved interactivity are features of many digital broadcasts, and your HDTV will help bring it all into your home.

GETTING STARTED

Now that you have an understanding of what your HDTV can do, read on to find necessary information about how to use the TV.

The first section of this manual shows you how to connect components and speakers to your TV. The "Basic TV Operation" section describes how you receive the three signals and the important modes of operation: TV mode and DIRECTV mode. The rest of this manual describes how to use your television's many features, such as program guides, picture and audio controls, and system options.

* The appearance of your satellite dish antenna may differ from that shown here.

SETUP AND CONNECTIONS

This section tells you how to get your HDTV set up and connected. It describes the cables you will need, explains the front and back panels, and walks you through the steps needed to start using your TV.

1 SETUP AND CONNECTIONS

2 USING THE REMOTE

3 BASIC TV OPERATION

4 USING THE PROGRAM GUIDES

5 ADJUSTING TV CONTROLS

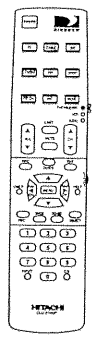
6 USING THE PROFILES

7 SYSTEM OPTIONS AND PREFERENCES

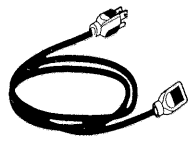
8 GETTING ASSISTANCE

9 REFERENCE

SETUP AND CONNECTIONS



Remote Control



Power Cord

STEP 1: UNPACK THE SYSTEM

Make sure to locate the remote control and power cord.

STEP 2: CONNECT YOUR TV TO OTHER COMPONENTS

During the satellite dish antenna installation, the TV may have been connected with just a coaxial cable for the system test. Depending on what components you have, another connection may provide better picture and audio quality. The following sections provide cable and connection information to help you decide what connection is best for you.

THINGS TO KNOW BEFORE CONNECTING COMPONENTS

Protect Your Components from Power Surges

- Connect all components before plugging any power cords into the wall outlet.
- Always turn off the TV and other components before you connect or disconnect any cables.

Position Cables Correctly to Avoid Audio Hum or Interference

- Insert all cable plugs firmly into their jacks.
- Place the audio/video cables to the sides of the TV's back panel instead of straight down the middle after you connect your components.
- Try not to coil any twin-lead cables; keep them away from the audio/video cables as much as possible.
- Make sure all antennas and cables are properly grounded. Refer to the safety sheet packed with your unit.

Protect Your Components from Overheating

- Do not block ventilation holes in any of the components. Arrange the components so that air can circulate freely.
- Do not stack components.
- Allow adequate ventilation when placing your components in a stand.
- Place an amplifier on the top shelf of the stand so that heated air rising from it will not flow around other components.

SETUP AND CONNECTIONS

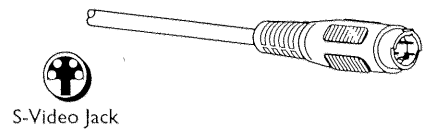
JACKS AND CABLES

Below is a description of the jacks and cables you can use to make connections. Note that not all cables come with your television unit.

S-Video Jack and Cable

The S-Video jack provides the best picture quality for your system.

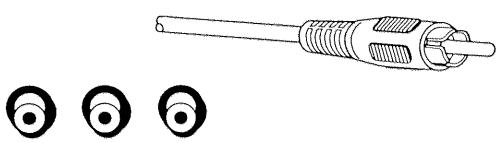
This jack is available on this TV and is used in conjunction with audio cables. Remember also to connect the left and right audio cables because the S-Video jack carries only the picture signal, not the sound.



Audio/Video Jacks and Cables (RCA-type)

The audio/video jacks provide very good picture and stereo sound quality.

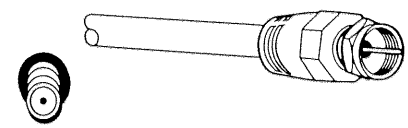
Theses jacks are used for most audio/video connections between components. The audio/video jacks are often color coded (yellow for video, red for right audio, and white for left audio). If your component has only one input for audio (mono), connect it to the left (white L/Mono) audio jack on the TV.



RF Jacks and Coaxial Cables (F-type)

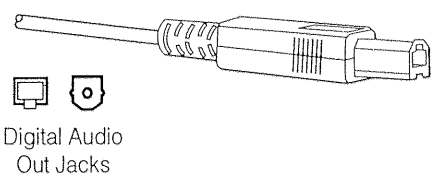
The RF jacks are necessary for reception of off-air broadcasts, cable, and DIRECTV signals.

These jacks are required for antenna or cable connections. The RF and coaxial jacks on the TV are labeled SATELLITE IN, ANTENNA A IN, and ANTENNA B IN. An RG-6 coaxial cable is advised for all satellite signal distribution.



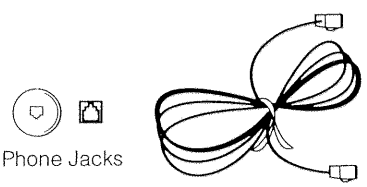
Optical Jack and Cables

The optical cable is used for connecting a Dolby Digital receiver. If you own a Dolby* Digital receiver that uses an optical cable-type input, you can use an optical cable to connect the TV to that receiver for the best sound quality.



Telephone Jack and Cord

The telephone line cord is required to connect your TV to a phone line. If you choose to subscribe to DIRECTV® Programming, some services require this phone line connection. The phone line connection is used to periodically call out to DIRECTV. You will need an RJ11 type modular jack, which is the most common type of phone jack and might look like the one pictured here. If you don't have a modular jack, call your local telephone company to find out how to get one installed.

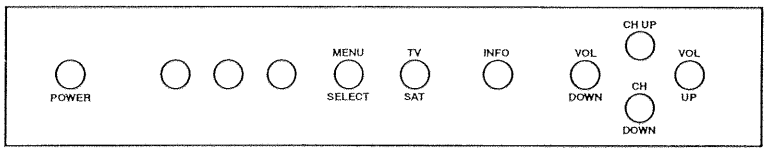


* Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories. Confidential Unpublished Works. ©1992-1997 Dolby Laboratories, Inc. All rights reserved.

FRONT OF THE TV

The diagrams below describe the front panel and front input jacks on the TV.

If you cannot find your remote control, you can use the front panel of the TV to operate many of the TV's features.



POWER Turns the TV on and off.

MENU/SELECT Brings up the main menu. When in the menu system, it selects highlighted items.

VOL < Decreases the volume. When in the menu system, VOL < moves the highlight left and adjusts menu controls.

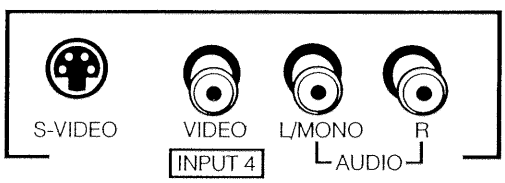
VOL > Increases the volume. When in the menu system, VOL > moves the highlight right and adjusts menu controls.

CH v Scrolls down through the current channel list. If you are in TV mode and press CHv, you scroll down through TV channels. If you subscribe to DIRECTV® Programming and are in DIRECTV mode, you scroll down through DIRECTV channels. In the menu system, CHv moves the highlight down and adjusts menu controls.

CH ^ Scrolls up through the channel list. If you are in TV mode and press CH^, you scroll up through TV channels. If you subscribe to DIRECTV® Programming and are in DIRECTV mode, you scroll up through DIRECTV channels. In the menu system, CH^ moves the highlight up and adjusts menu controls.

TV/SAT Toggles between TV mode and DIRECTV mode.

INFO Brings up the on-screen channel banner. Press when in the program guide to get more information on the highlighted program or channel.



INPUT 4 Lets you connect a baseband NTSC (analog) component such as a VCR, Internet access device, game, or camcorder.

S-VIDEO Lets you connect an S-Video cable for better video quality picture to a component with S-Video capability, such as a VCR. When using S-Video, make sure to connect the two audio cables as well as the S-Video connector.

VIDEO Provides video connection. The video connector is usually yellow.

AUDIO

L/MONO Provides left audio connection. The left audio connector is usually white.

R AUDIO Provides right audio connection. The right audio connector is usually red.

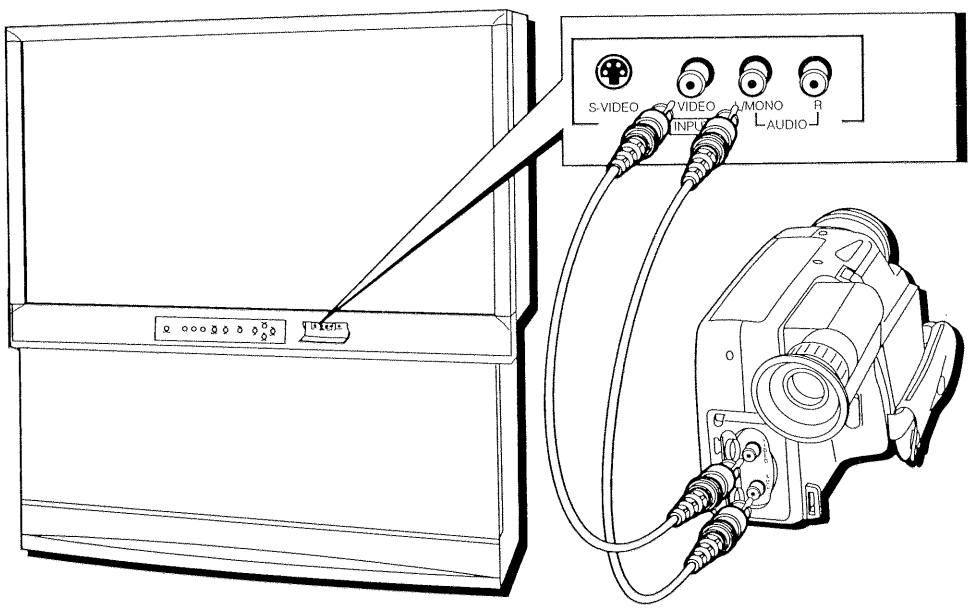
Making Connections to the Front Panel

You can connect one of many types of devices to the TV's front panel, such as a video game or camcorder for playback.

To connect a device to the front panel:

1. Open the small front panel door protecting the INPUT 4 jacks.
2. Connect the device's audio/video outputs to the INPUT 4 audio and video jacks on the TV.
3. If the device has S-Video capability, connect an S-Video cable (instead of the video cable) from the device to the S-VIDEO jack on the TV. If not, skip this step.
4. Press the INPUT button on the remote control until INP4 (or SINP4 if you have connected an S-Video cable) appears in the channel banner.

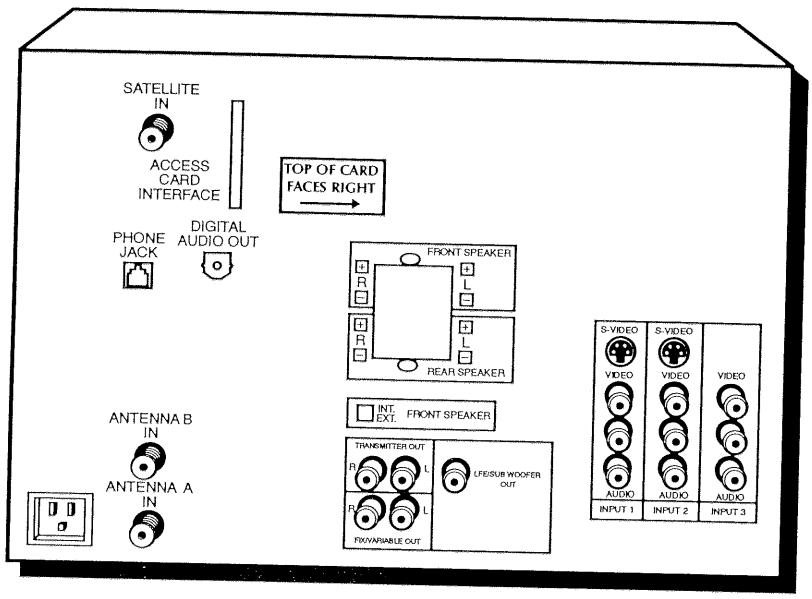
Below is an example of how you might connect a camcorder for playback.



SETUP AND CONNECTIONS

BACK OF THE TV

The diagram below describes each of the back panel jacks found on the TV. When connecting A/V cables, be sure to connect corresponding outputs and inputs (video to video, right audio to right audio, etc.).



SATELLITE IN Use to connect the satellite dish antenna to the TV.

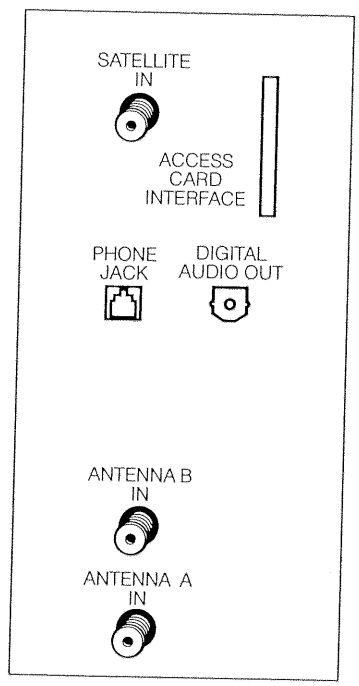
ACCESS CARD INTERFACE Insert the access card into the slot so your program provider can identify you. Make sure the contacts on the access card are on the left of the card while inserting. (Refer to "New Access Card" in this manual's "Assistance" section for details.) The DIRECTV System requires a valid card.

PHONE JACK Use to connect a phone line to the TV. For some services, the DIRECTV System requires a continuous phone line connection to periodically call out to DIRECTV.

DIGITAL AUDIO OUT Use a digital optical cable (or SPDIF cable) to connect your TV to a compatible Dolby Digital receiver or decoder. Dolby Digital offers theatre-quality sound (six audio channels). You will not be able to use this jack and the LFE/SUBWOOFER OUT simultaneously.

ANTENNA B IN Use to connect an off-air or terrestrial antenna or cable TV signal to the TV.

ANTENNA A IN Use to connect a second off-air or terrestrial antenna or cable TV signal to the TV.



You can also use the ANT B IN (or ANT A IN) for video games and switch between the two inputs using the ANTENNA button on the remote control. When using TV games, computers, and similar products with your TV, keep the contrast at a low setting. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high contrast setting, the image can be permanently imprinted onto the picture tubes. These types of imprints are not covered by your warranty because they are the result of misuse.

SETUP AND CONNECTIONS

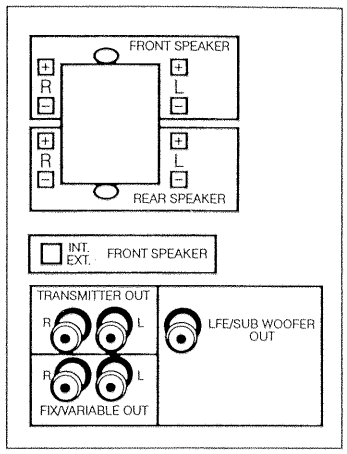
FRONT and REAR SPEAKER Terminals Use to connect external speakers for front sound and rear surround sound.

FRONT SPEAKER INT. / EXT. (switch) Set to INT. if you want to use the internal TV speakers only or the internal TV speakers plus separate rear speakers. Set to EXT. if you want to use any combination of front external speakers. This switch does not turn off the TV center speaker.

TRANSMITTER OUT Use to connect an optional component such as a wireless audio transmitter.

FIX/VARIABLE OUT Use to connect an audio receiver or amplifier (an auxiliary baseband component) for variably-controlled or fixed level stereo output. When set to fixed (via the *Audio Output* choice in the Speakers menu), a fixed-level audio signal is provided, making these jacks ideal for audio recording or for use with an audio amplifier that has its own remote control.

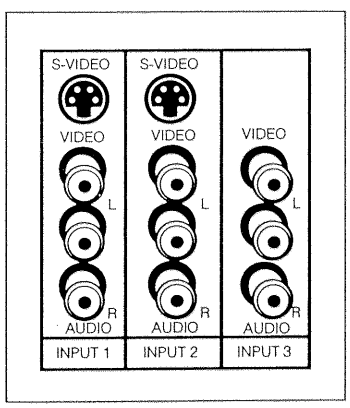
LFE/SUBWOOFER OUT Use to connect a LFE (Low Frequency Effects) powered subwoofer. This jack is tailored for carrying low frequency information. You will not be able to use this jack and the DIGITAL AUDIO OUT (an optical output) simultaneously.



To specify how you have set up your speakers, press MENU on the remote control and choose *Audio*. Then choose *Speakers...* from the menu. For details, see the section "Adjusting TV Controls" in this book.

INPUT 1 Lets you connect a baseband NTSC (analog) component such as a VCR, laserdisc player, Internet access device, or DVD player.

- R AUDIO provides right audio connection. The right audio connector is usually red.
- L AUDIO provides left audio connection. The left audio connector is usually white.
- VIDEO provides composite video connection. The video connector is usually yellow.
- S-VIDEO lets you connect an S-Video cable for better video quality picture to a component with S-Video capability, such as a VCR or DVD player. When using S-Video, make sure to connect the two audio cables, as well as the S-Video connector.



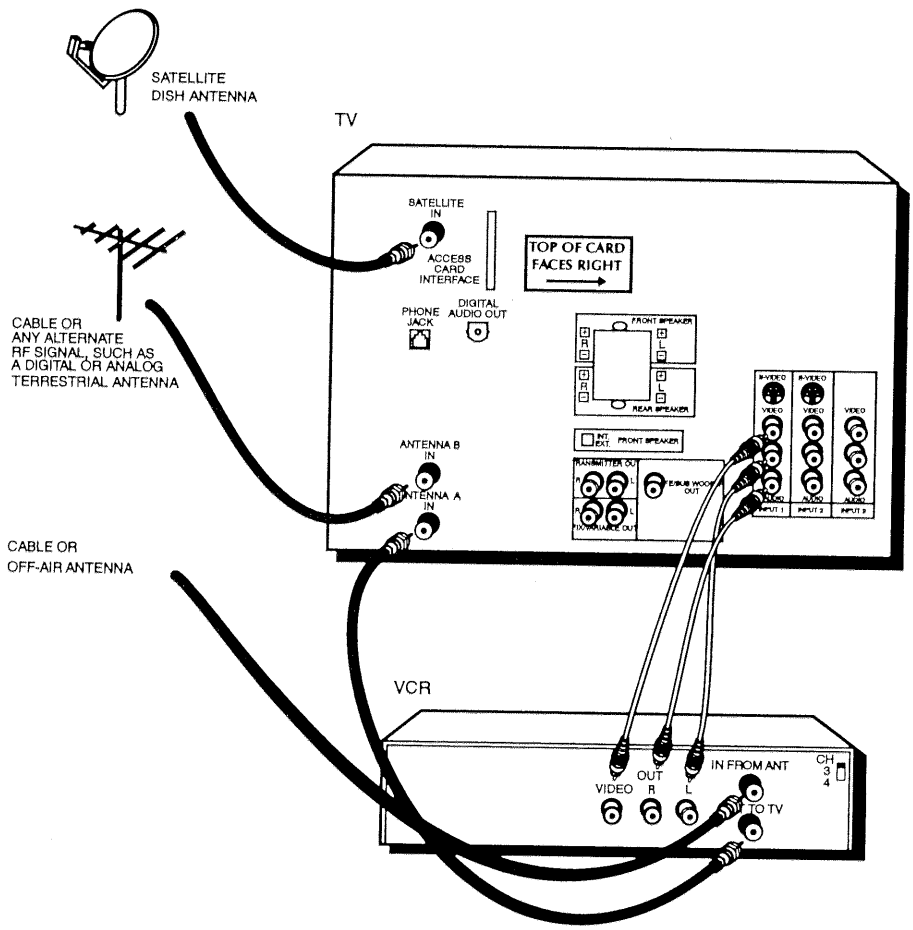
INPUT 2 Provides connection to a second NTSC (analog) video component such as a VCR or laserdisc player. Its jacks are the same as described for INPUT 1, above.

INPUT 3 Provides connection to a third NTSC (analog) video component, such as a VCR or laserdisc. Its jacks are the same as described for INPUTS 1 and 2, except with no S-Video jack.

SETUP AND CONNECTIONS

THE BASIC CONNECTION

TV and VCR



Some cable systems may require a "conversion box." If so, consult your cable company's box tuning instructions for details.

How to view programming:

- To watch cable TV or off-air TV programs from an antenna in this connection, press DTV/SAT on the remote control until ANTENNA A is displayed in the channel banner.
- To watch cable or any other alternate RF signal, such as digital or analog terrestrial, press ANT on the remote control until ANTENNA B is displayed in the channel banner.
- To watch DIRECTV® programming, press DTV/SAT on the remote control until DIRECTV is highlighted in the channel banner, then channel up or down to the desired program.

How to view your VCR:

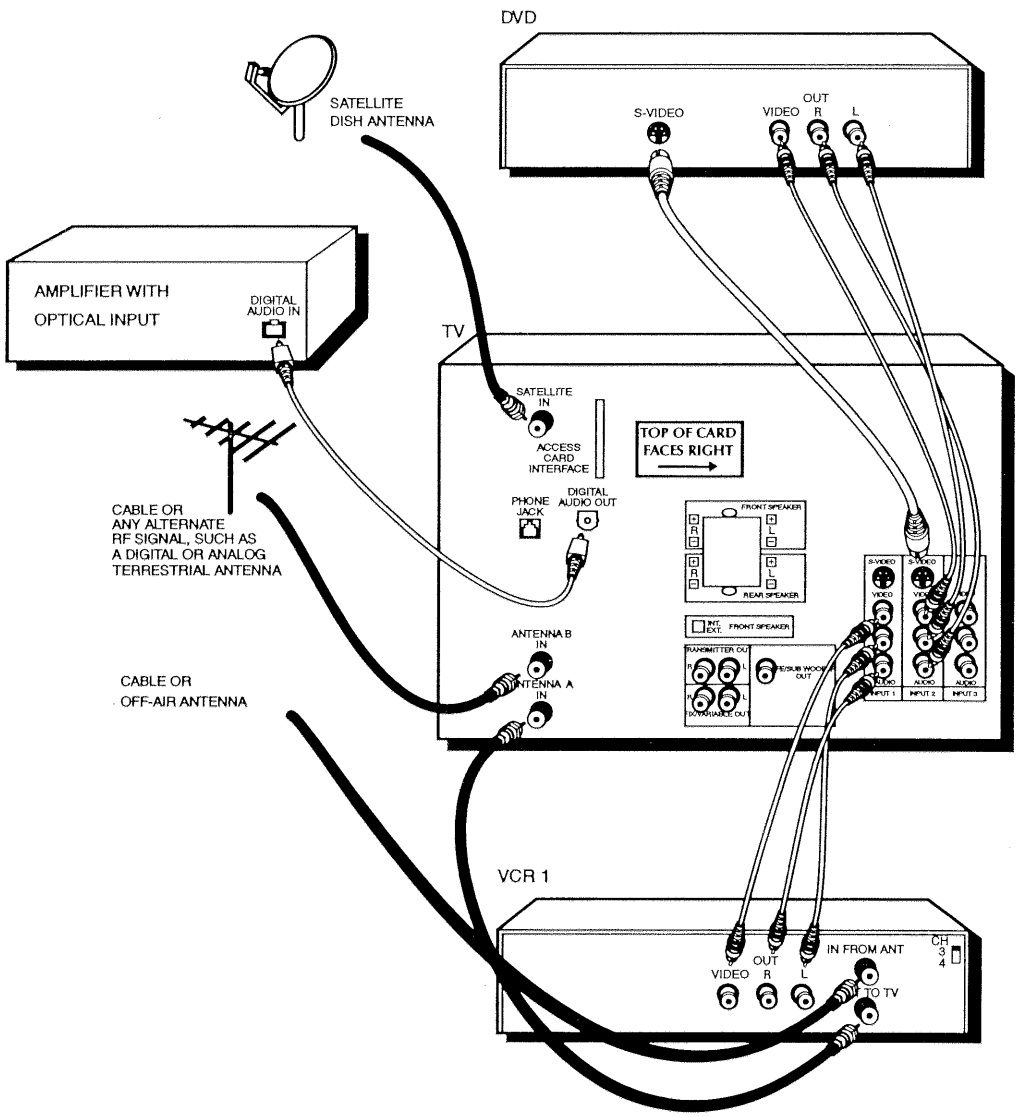
- Press INPUT on the remote control and select the video input (in this example, VID1) in the channel banner. Because the digital decoder is in the TV, not the VCR, digital channels cannot be recorded. If an off-air antenna is used, the VCR output should be viewed using one of the video inputs.
- NOTE: Viewing a VCR in AIR mode may result in poor picture performance.

The ANT B and ANT A jacks can receive digital or analog RF signals. The illustrations here are recommended connections in a cable environment.

SETUP AND CONNECTIONS

THE ADVANCED CONNECTION

TV, VCR, and DVD Player With Amplifier



After you have made your connections, program the TV to tune to the correct video input channel to see and hear audio and video from the attached component (VCR, DVD player, etc.). Program your TV as described in the "System Options and Preferences" section of this book.

How to view your DVD and VCR:

- To watch the VCR in this connection, press INPUT on the remote control until the correct video input appears (in this example, VID1). Note that because the digital decoder is in the TV, not the VCR, you cannot record digital channels.
- To watch the DVD player in this connection, press INPUT on the remote control until the correct video input appears (in this example, SINP2).

Some cable systems may require a "conversion box." If so, consult your cable company's box tuning instructions for details.

Please Read Before Using the Digital Audio Out Jack

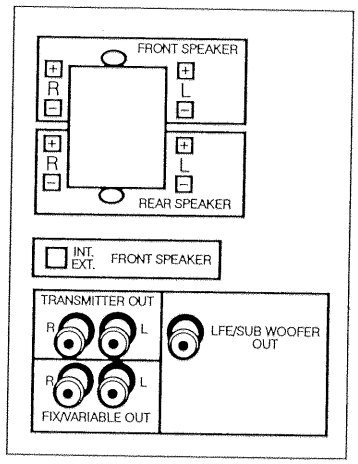
This TV's optical digital output jack fully complies with the international standard governing this type of jack (IEC958), and is designed for connection to a Dolby Digital (AC-3 or PCM) receiver or Dolby Digital (AC-3 or PCM) decoder. Older equipment, some of which is not fully compliant with IEC958, may not be compatible with the Dolby Digital bitstream. Such a connection using anything other than Dolby Digital AC-3 or PCM receiver or decoder could create a high noise level, causing damage to headphones or speakers.

CONNECTING SPEAKERS TO THE TV

You can connect up to four additional speakers to the TV: two to the FRONT SPEAKER terminal, and two to the REAR SPEAKER terminal.

1. If necessary, remove the vinyl covering from the ends of the speaker wire and twist the wire core.
2. Press down and hold the lever on the speaker terminal.
3. Insert the wire core into the hole. Be sure to connect the (+) to (+) and (-) to (-).
4. Release the lever. Pull gently on the wire to see that it's connected securely.

To specify how you have set up your speakers, press MENU on the remote control and choose *Audio*. Then choose *Speakers...* from the menu. For details, see the section "Adjusting TV Controls" in this book.



Connecting Front (Main) Speakers

To connect external front speakers:

1. Connect speakers to the FRONT SPEAKER terminal.
2. Set the speaker switch (labeled FRONT SPEAKER) to EXT. to indicate you would like to use the connected external speakers.

Connecting Rear Speakers

To connect rear speakers for surround sound effects:

1. Connect speakers to the REAR SPEAKER terminal.
2. Position the speakers behind you in your TV room. To improve the surround sound effect, you may prefer to set or mount the speakers several feet off the ground.

When connecting the speaker wire, make sure you connect the positive (+) terminal on the TV to the positive (+) terminal on the speaker. One side of the speaker wire is usually marked with a white stripe to help you match the terminals correctly. If the (+) and (-) terminals are not matched properly, the speakers will not be "in phase," causing reduction in bass frequencies.

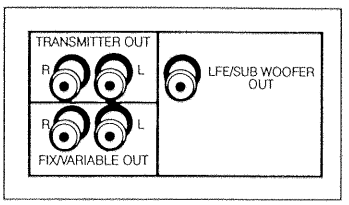
Do not allow the wire core to touch other wires or terminals. Damage to components could result if the cores of two wires touch.

SETUP AND CONNECTIONS

Connecting a Subwoofer

To connect a subwoofer to the TV:

1. Connect the subwoofer's audio input to the LFE/SUBWOOFER OUT jack.



Connecting a Wireless Transmitter

To connect a wireless transmitter (for wireless speakers, wireless headphones, etc.):

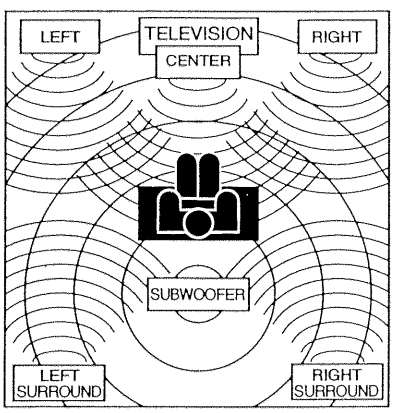
1. Connect the transmitter's audio input to the TRANSMITTER OUT jack. Make sure to connect the right audio cable to the right audio jack and the left audio cable to the left audio jack. The right audio connector is usually red and the left audio connector is usually white.
2. Specify that you have connected a wireless transmitter by pressing MENU on the remote control, selecting *Audio*, then *Special Audio*, then *Transmitter Out*. Select the appropriate variable audio output. For more information, see the section in this book, "Adjusting TV Controls."

Connecting a Stereo Amplifier

1. Connect the amplifier's TV audio inputs to the left and right FIX/VARIABLE OUT jacks.
2. You may prefer to turn off the TV's internal speakers by selecting a speaker configuration with external speakers. Select *Audio* from the main menu and then select *Speakers*.

   Important: Do not use the amplifier's PHONO inputs. Consult the amplifier's owner's manual for the manufacturer's recommended hookup.

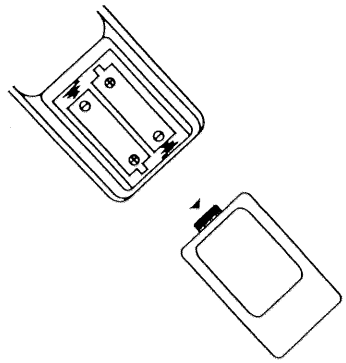
The FIX/VARIABLE OUT jacks on the back panel provide a fixed or variable audio signal. When set to "variable" via the Audio menu, they are ideal for use with an audio amplifier that does not have its own remote volume control. When set to "fixed," the output volume stays the same no matter how the volume changes on the TV.



Arrange the speakers in your TV room to achieve maximum sound quality.

SETUP AND CONNECTIONS

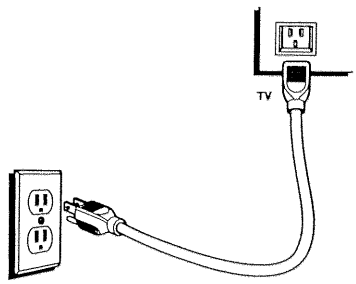
STEP 3: PLACE BATTERIES IN THE REMOTE CONTROL



Follow these steps whenever you need to install or change the batteries in your TV's remote control.

1. Remove the cover from the battery compartment.
2. Insert batteries into the battery compartment, matching the + and – end of each battery.
3. Replace the cover.

STEP 4: PLUG IN AND TURN ON THE SYSTEM



Plug one end of the power cord into the back of the television as shown on right. Plug the other end into a wall outlet. Be sure to insert the plugs completely.

To turn on the TV, press the POWER button on the remote control or the POWER button on the front panel. It may take several seconds for the TV to turn on.

STEP 5: COMPLETE THE SYSTEM SETUP

System setup appears when you turn on your TV for the first time. Follow the steps to configure the basics of your system, such as setting up the time and day, searching for available channels, and setting up speakers. To run it again, select *Assistance* from the main menu, then select *System Setup*. For more details, see the section "Getting Assistance" in this book.

STEP 6: ORDER PROGRAMMING

You should decide if you would like to receive DIRECTV® programming.* To receive DIRECTV programming, your satellite dish antenna must be installed and pointed correctly. You must also contact your service provider.

Programming with DIRECTV: Call 1-800-347-3288

*DIRECTV programming is provided in accordance with the terms and conditions of the DIRECTV Customer Agreement, a copy of which is provided with your first DIRECTV billing statement. DIRECTV is a trademark of DIRECTV, Inc., a unit of Hughes Electronics Corp., and is used with permission.

When you order programming, you need to know your access card number. To get the number, select *Assistance* from the main menu and then select *System Test*.

Wait for the system to run all of its tests. The access card number is displayed at the end of the system test.

Write the access card number in the space below for easy reference:

_____

USING THE REMOTE

In this section you will find out how to use your universal remote control. This section:

- defines the buttons on the remote control.
- describes how you toggle between TV "mode" and SAT "mode."
- shows you how to change between analog terrestrial, digital terrestrial, and DIRECTV channels.
- walks you through using the PIP (picture-in-picture) feature.
- describes how to program the remote to control other devices such as a VCR.

Important: Because this universal remote can control several different components (TV, VCR, etc.), it uses operational modes triggered by the component buttons and multi-page select switch on the side of the remote. For example, if you want the remote to control a cable box, you would slide the multi-page select switch to TV/CABLE/SAT mode and press the CABLE button to put the remote into cable mode so you could control the cable box.

1 SETUP AND CONNECTIONS

2 USING THE REMOTE

3 BASIC TV OPERATION

4 USING THE PROGRAM GUIDES

5 ADJUSTING TV CONTROLS

6 USING THE PROFILES

7 SYSTEM OPTIONS AND PREFERENCES

8 GETTING ASSISTANCE

9 REFERENCE

REMOTE CONTROL BUTTONS

POWER When the remote control is in TV mode, turns the TV on or off. If in another component mode, (VCR, AUDIO, etc.) and programmed, will turn the component on and off.

TV Places the remote control in TV mode. Placing the remote in TV mode enables you to access the menu system as well as tune to analog, digital, cable TV, or DIRECTV channels.

CABLE Places the remote in CABLE mode. Placing the remote in CABLE mode enables you to control your cable box, once you have properly programmed the remote.

SAT(Satellite) Places the remote in SAT mode. Placing the remote in SAT mode enables you to control an external satellite receiver, once you have properly programmed the remote.

DTV/SAT Toggles the television between TV mode and SAT mode.

PIP Brings up the small picture-in-picture window. Press again to hide PIP.

SWAP Exchanges the main picture with the PIP window.

PIP CH (PIP Channel) Selects the picture window (either the main or PIP window) that will change when you press the CH +, CH -, INPUT, or digit buttons on the remote control.

ANT(Antenna) Switches the source of the off-air signal between ANTENNA A and B.

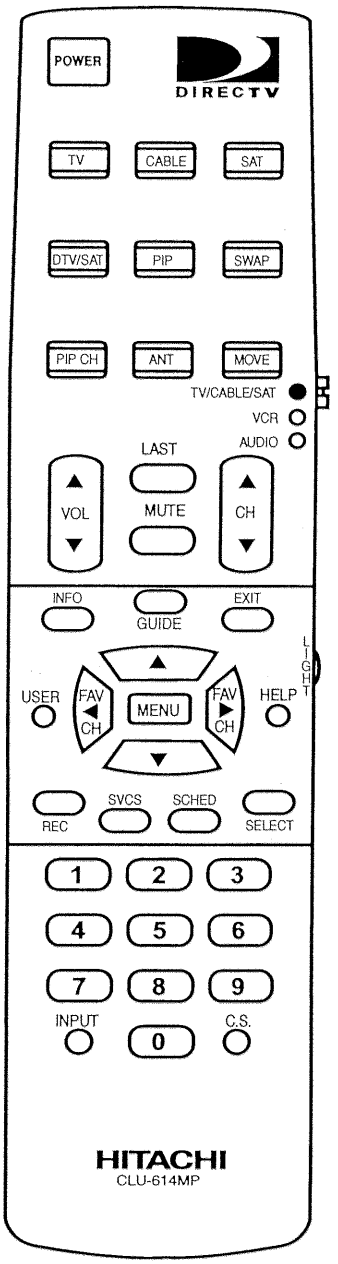
MOVE Moves the PIP window to a different corner of the television screen with each press. You can also use the Arrow keys to move the PIP window, when no menus are on the screen.

VOL UP/DOWN Adjusts the TV's audio volume.

LAST Moves you back and forth between the last two channels selected in either SAT mode or TV mode. For example, if you have been viewing both SAT and TV channels, pressing LAST while watching a DIRECTV channel moves you back to the last DIRECTV channel you viewed. Pressing it while watching a TV channel moves you to the last TV channel you viewed. In the menu system, pressing LAST returns you to the previous menu screen.

MUTE Reduces the TV's volume to its minimum level. Press again to restore volume.

CH UP/DOWN Scrolls up or down through the current channel list. Press once to change the channel up or down; press and hold to continue changing channels. If you are in TV mode and press CH+/-, you scroll through TV channels. If you subscribe to DIRECTV and are in SAT mode, you scroll through DIRECTV channels.



USING THE REMOTE

INFO Brings up channel and viewing information via the channel banner. Press again to bring up an extended channel banner. Press when in the program guides to get more information on the highlighted program or channel.

GUIDE When television is in TV mode, brings up the TV program guide. When television is in SAT mode, brings up the DIRECTV® programming guide. Subsequent presses of the GUIDE button scroll through the different types of guides.

EXIT Removes on screen displays and returns to normal viewing. If no displays are present and the skip timer is set, EXIT will cancel the timer.

MENU Brings up the main menu and selects highlighted items.

ARROWS Used to point to different items in the menu system and adjust the menu controls. Also move the PIP window when no menus are on the screen.

USER Toggles through user profiles.

HELP Press this button when a menu is displayed to view HELP text, which gives a description of the chosen menu.

SELECT When in the menu system, selects highlighted items.

DIGIT BUTTONS (0 - 9) Enters channel numbers and time settings directly through the remote control. For more information on entering digits to change channels, see the section "Basic TV Operation." When in the menus, the digit buttons can be used to directly select items without using the arrows. 0 can be used to return to the previous menu screen.

INPUT Toggles through the available external input sources.

C.S. (Channel Skip) Press once before changing channels and the TV will wait 30 seconds and then return to the original channel. Press repeatedly to add more time. If no other displays are present, pressing EXIT will cancel the skip timer.

LIGHT Press to illuminate the remote control's buttons.

Don't worry about getting stuck inside a menu. Pressing the EXIT button on the remote control takes you out of the menu system.

USING THE REMOTE TO CONTROL CABLE BOX OR EXTERNAL SATELLITE RECEIVER FUNCTIONS

Operating the precoded function for your cable box or external satellite receiver.

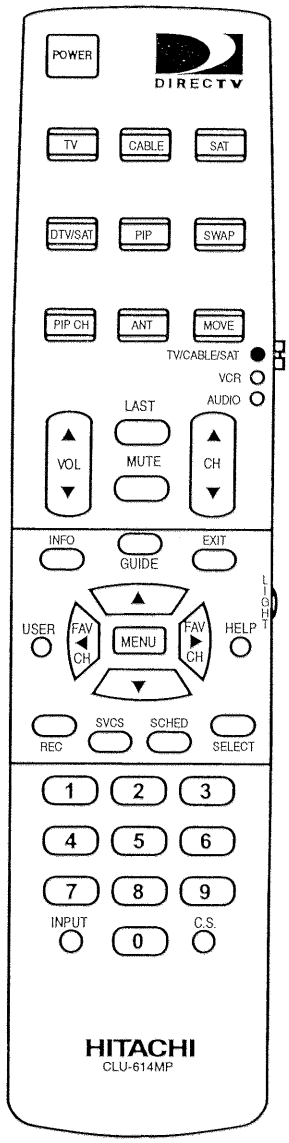
This remote is designed to operate different types of cable boxes and external satellite systems. You must first program the remote to match the remote system of your cable/satellite box.

1. Set the MULTI-PAGE select switch, on the side of the remote control, to TV/CABLE/SAT.
2. Turn ON the component (Cable Box or External Satellite Receiver) you wish to control with the remote.
3. Press and release CABLE or SAT button to switch to CABLE or SAT mode.
4. Aim the remote at the front of the component.
5. Press and hold down the CABLE or SAT button.
6. While holding down the button, enter the 2 digit preset code which matches the component as shown on page 28. The remote will turn OFF the component when the correct code is entered, indicating that the remote is now programmed.

ATTENTION: **If the component does not turn OFF after 5 seconds, the wrong code was entered. Consult page 28 again and try one of the other codes listed for that Cable box or Satellite receiver.**

NOTES:

1. If your cable box or external satellite receiver cannot be operated after performing the above procedures, your code has not been precoded into the remote.
2. In the unlikely event that your cable box or external satellite receiver cannot be operated after performing the above procedures, please consult your operating guide.
3. The remote control will remember the codes you have programmed until the batteries are removed form the remote control. After replacing the batteries repeat the entire programming procedure as stated above.
4. If your cable box or external satellite receiver does not have a power function, the remote will issue the CHANNEL UP function.
5. The LAST button will act as the cable box ENTER button if required.
6. The INPUT button will act as the TV/SAT button when in SAT mode.



The remote may not operate all models of all brands.

USING THE REMOTE TO CONTROL VCR FUNCTIONS

Operating the precoded function for your VCR.

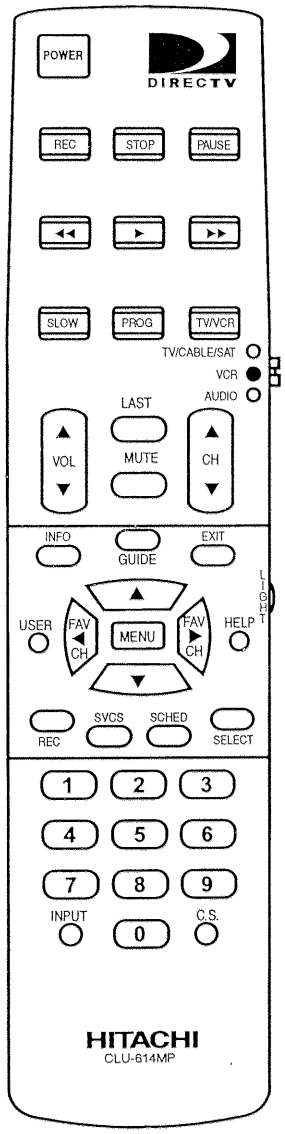
This remote is designed to operate different types of VCRs. You must first program the remote system of your VCR.

1. Set the MULTI-PAGE select switch, on the side of the remote control, to VCR.
2. Turn ON VCR.
3. Aim the remote control at the front of the VCR.
4. Press and hold down the PROG button.
5. While holding down the button, enter the 2 digit preset code which matches the VCR as shown on page 28. The remote will turn OFF the VCR when the correct code is entered, indicating that the remote is now programmed.

ATTENTION:	**If the VCR does not turn OFF after 5 seconds, the wrong code was entered. Consult page 28 again and try one of the other codes listed for that VCR brand name.**

NOTES:

1. If your VCR cannot be operated after performing the above procedures, your code has not been precoded into the remote.
2. In the unlikely event that your VCR cannot be operated after performing the above procedures, please consult your VCR operating guide.
3. The remote control will remember the codes you have programmed until the batteries are removed from the remote control. After replacing the batteries repeat the entire programming procedure as stated above.
4. If your VCR does not have a power function, the remote will issue the CHANNEL UP function.
5. The MENU button will act as the VCR MENU button for HITACHI VCRs.
6. The LAST button will act as your VCR ENTER button if required.
7. The REC button must be pressed two times to begin VCR recording. This button will also act as the VCR record button when the remote is in CABLE or SAT mode.



The remote may not operate all models of all brands.

USING THE REMOTE TO CONTROL AUDIO EQUIPMENT FUNCTIONS

Operating the precoded function for your audio equipment.

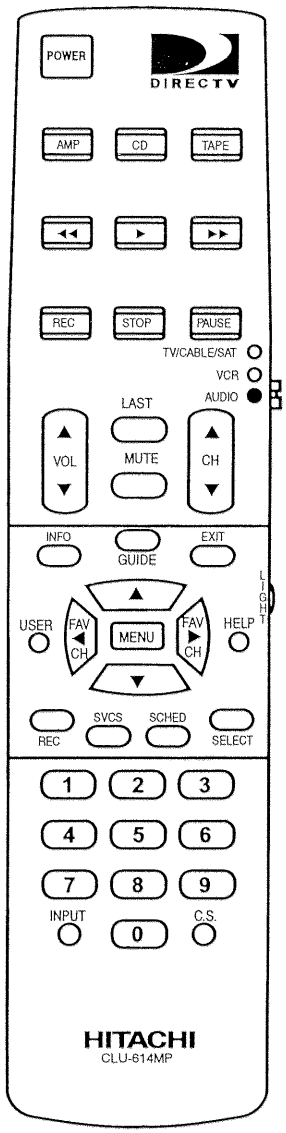
This remote is designed to operate certain types of audio equipment. You must first program the remote to match the remote system of your audio equipment.

1. Set the MULTI-PAGE switch, on the side of the remote control, to AUDIO.
2. Turn ON the component (AMP, CD or TAPE) you wish to control with the remote.
3. Press and release AMP, CD or TAPE button to switch to AMP, CD or TAPE mode.
4. Aim the remote at the front of the component.
5. Press and hold down the AMP, CD or TAPE button.
6. While holding down the button, enter the 2 digit preset code which matches the component as shown on page 28. The remote will turn OFF the component when the correct code is entered, indicating that the remote is now programmed.
7. Repeat steps 2-6 until all audio equipment preset codes are programmed into the remote.

ATTENTION:	**If the component does not turn OFF after 5 seconds, the wrong code was entered. Consult page 28 again and try one of the other codes listed for that component brand name.**

NOTES:

1. If your audio equipment cannot be operated after performing the above procedures, your audio component code has not been precoded into the remote.
2. In the unlikely event that your audio component cannot be operated after performing the above procedures, please consult your audio components operating guide.
3. The remote control will remember the codes you have programmed until the batteries are removed from the remote control. After replacing the batteries repeat the entire programming procedure as stated above.
4. If your audio component does not have a power function, the remote will issue another obvious function that the audio component will respond to, such as CD open/close.
5. The default for AUDIO mode is AMP.
6. If you wish to control your receiver or miscellaneous audio equipment, you must follow the remote programming procedure shown above. You may use only the AMP button to program these codes, but note that this button may not be used for more than one component.
7. The LAST button will act as your audio component's ENTER button if required.



The remote may not operate all models of all brands.

REMOTE CONTROL CODES

AMPLIFIER BRAND	CODE
Aiwa	04, 05
Carver	00, 05, 06, 07
Casio	08
Clarinette	08
Denon	09
Fisher	07, 10
Hitachi	11
JVC	12
Kenwood	13, 14, 16, 17
Lloyd's	08
Magnavox	00, 05, 08
Marantz	00, 05, 15
MCS	15
Modulaire	08
Onkyo	18
Optimus	02, 03, 10, 14, 19
Panasonic	15
Penney	08
Philips	00, 05
Pioneer	02, 03, 19, 20, 21
Quasar	15
Realistic	08
Sansui	05
Sanyo	10
Sharp	14
Sony	04
Technics	01, 15, 22, 23, 24
Victor	12
Wards	02, 04, 05, 07, 19, 20
Yamaha	14, 25
Yorx	08

CABLE BRAND	CODE
ABC	00, 07, 08, 18, 19, 21, 37, 38, 53
Antronix	40
Archer	12, 25, 40
Belcor	33
Cable Star	33
Century	12
Citizen	12
ColourVoice	31, 45
Comtronics	26, 29
Contec	22
Dae Ryung	21
Eastern	15
Electricord	32
Everquest	56
Focus	57
Garrard	12
GC Electronics	33, 40
Gemini	04, 39, 44, 56
General Instrument	00, 13
Gold Star	11, 26
Hamlin	03, 09, 14, 23, 24
Hitachi	00
Hytex	37
Jasco	12
Jerrold	00, 08, 13, 38, 53, 55, 56
Macom	36
Magnavox	16
Memorex	02
Movie Time	30, 32, 34
NSC	30, 34, 39
Oak	22, 37, 50
Panasonic	02, 10, 49
Paragon	02
Philips	12, 16, 17, 27, 31, 43, 44, 45, 47
Pioneer	06, 11, 20
Popular Mechanics	57
Pulsar	02
RCA	49
Realistic	40
Recoton	57
Regal	03, 09, 23, 35
Regency	15
Rembrandt	00, 39
Runco	02
Samsung	11, 26
Scientific Atlanta	18, 21, 42, 48
Signal	26, 56
Signature	00
SL Marx	26
Sprucer	01, 49
Starcom	38, 53, 56
Stargate	26, 56
Starquest	56
Starsight	58, 59
Sylvania	19
Teleview	26
Texscan	19
Tocom	07, 28, 55
Toshiba	02
Tusa	56
TV 86	30
Unika	12, 40
United Artists	37
United Cable	53
Universal	12, 25, 32, 33, 35, 40
Videoway	51
Viewstar	16, 29, 30, 41
Zenith	02, 52, 60
Zentek	57

TAPE BRAND	CODE
Aiwa	58, 59
Hitachi	47, 48, 49, 50
Jerrold	60, 61
JVC	51
Kenwood	52
Optimus	53
Panasonic	54
Pioneer	53
Scientific Atlanta	62
Sony	55, 56, 58, 59
Starcom	60
Wards	53

CD BRAND	CODE
Adcom	26
Aiwa	27
California Audio Lab	28
Carver	27
Denon	29
DKK	30
Emerson	26
Fisher	31
Genexxa	32
Hitachi	26, 32, 33, 34, 35, 36, 37
JVC	38
Kenwood	31, 39, 40
Krell	27
Magnavox	27
Marantz	27, 28
MCS	28
Mission	28
NSM	27
Onkyo	41
Optimus	30, 32, 42
Panasonic	28
Philips	27
Pioneer	32, 42
Proton	27
QED	27
Quasar	28
RCA	26, 33
Realistic	26
Rotel	27
SAE	27
Sansui	27
Scott	26
Sony	30, 44
Technics	28, 45, 46
Victor	38

MISC BRAND	CODE
Aiwa	58, 59
Jerrold	60, 61
Scientific Atlanta	62
Sony	58, 59
Starcom	60

RECEIVER BRAND	CODE
Aiwa	04, 05
Carver	05, 06, 07
Casio	08
Clarinette	08
Denon	09
Fisher	07, 10
Hitachi	11
JVC	12
Kenwood	13, 14, 16, 17
Lloyd's	08
Magnavox	05, 08
Marantz	05, 15
MCS	15
Modulaire	08
Onkyo	18
Optimus	10, 14, 19
Panasonic	15
Penney	08
Philips	05
Pioneer	02, 19, 20, 21
Quasar	15
Realistic	08
Sansui	05
Sanyo	10
Sharp	14
Sony	04
Technics	15, 22, 23, 24
Victor	12
Wards	04, 05, 07, 19, 20
Yamaha	14, 25
Yorx	08

SAT BRAND	CODE
Hitachi	61
RCA	62
Sony	63

VCR BRAND	CODE
Adventura	00
Aiko	08
Aiwa	00
Akai	01, 48, 49
American High	22
Asha	45
Audiovox	23
Beaumark	45
Bell & Howell	32
Brandt	43
Broksonic	33, 34, 42, 51, 52
Calix	23
Canon	22
Capehart	06
Carver	31
CCE	08, 30
Citizen	08, 23
Colt	30
Craig	18, 23, 30, 45
Curtis Mathes	01, 22, 47
Cybernex	45
Daewoo	06, 08, 16, 38, 50
Daytron	06
Dynatech	00
Electrohome	23
Electrophonic	23
Emerex	07
Emerson	00, 08, 12, 15, 23, 27, 28, 33, 34, 37, 42, 48, 51, 52
Fisher	18, 20, 32, 46
Fuji	09, 22
Funai	00
Garrard	00
GE	03, 22, 41, 47
Goldstar	23, 24, 44
Gradiente	00
Harley Davidson	00
Harman/Kardon	24
Harwood	30
Headquarter	17
Hi-Q	18
Hitachi	01, 02, 03, 04
Jensen	01
JVC	01, 13, 26
KEC	08, 23
Kenwood	01, 24, 26
KLH	30
Kodak	22, 23
Lloyd	00
Lloyd's	27
Logik	30
LXI	23
Magnavox	14, 22, 29, 31, 35
Magnin	45
Marantz	22, 31
Marta	23
Matsushita	22
MEI	22
Memorex	00, 14, 17, 18, 19, 22, 23, 32, 45
MGA	15, 48
MGN Technology	45
Minolta	02, 04
Mitsubishi	15, 26, 40, 48, 49
Motorola	19, 22
MTC	00, 45
Multitech	00, 30
NEC	01, 05, 24, 26, 32
Nikko	23
Noblex	45
Olympus	11, 22
Optimus	19, 23, 32
Orion	51
Panasonic	10, 11, 22, 39, 53
Penney	02, 05, 22, 23, 24, 45, 46
Pentax	02, 03, 04
Philco	22
Philips	22, 29, 31
Pilot	23
Pioneer	26
Portland	06
Protec	30
Pulsar	14
Quarter	17
Quartz	17
Quasar	22
Radio Shack	00, 23
Radix	23
Randex	23
RCA	02, 03, 04, 35, 41, 47
Realistic	00, 17, 18, 19, 20, 22, 23, 32, 45
Ricoh	21
Runco	14
Samsung	16, 45
Sanky	14, 19
Sansui	01, 26
Sanyo	17, 18, 32, 45
Scott	15, 16, 33, 34, 37, 42
Sears	02, 04, 17, 18, 20, 22, 23, 32, 46
Sharp	19
Shintom	30
Shogun	45
Singer	30
Sony	07, 09, 21, 22
STS	02
Sylvania	00, 15, 22, 29, 31
Symphonic	00
Tatung	01
Teac	00, 01
Technics	22, 39
Teknika	00, 22, 23
Telefunken	43
TMK	27, 45
Toshiba	15, 16, 20, 37
Totevision	23, 45
Unitech	45
Vector	16
Vector Research	05, 24
Video Concepts	05, 16, 48
Videosonic	45
Wards	00, 02, 18, 19, 22, 30, 35, 37, 45, 47
XR-1000	00, 22, 30
Yamaha	24
Zenith	09, 14, 21

BASIC TV OPERATION

This section tells you about the channel banner, which appears when you change channels or press INFO on the remote.

It also describes how to change channels and modes and how to use PIP (picture-in-picture).

This section gives you a broad, clear view of how to operate the basics of your TV.

1 SETUP AND CONNECTIONS

2 USING THE REMOTE

3 BASIC TV OPERATION

4 USING THE PROGRAM GUIDES

5 ADJUSTING TV CONTROLS

6 USING THE PROFILES

7 SYSTEM OPTIONS AND PREFERENCES

8 GETTING ASSISTANCE

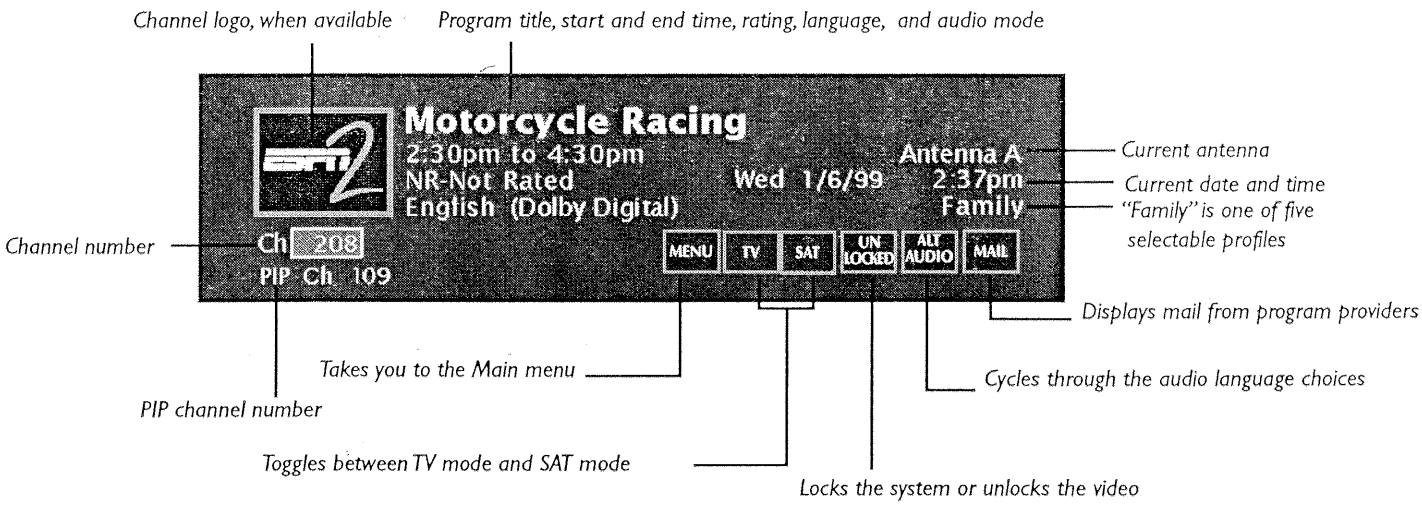
9 REFERENCE

ABOUT THE CHANNEL BANNER

The channel banner appears whenever you tune to a channel or press INFO on the remote control. Use the arrow buttons and SELECT to choose an item in the channel banner.

On-screen items represent frequently-used features. Some items also change appearance to show the item's status.

Below is a description of the items you'll find on the channel banner.



Please note that when you're in TV mode, the channel banner will look differently than when you're in SAT mode (if you subscribe to DIRECTV® programming).

Main When selected, takes you to the main menu.

TV/SAT Toggles between TV and SAT mode. The highlight indicates the current mode.

Temp Unlocked Indicates that the system is unlocked. Spending, viewing and other limits can be accessed and changed.

Temp Unlocked Indicates that a password has been entered to override profile limits. No limits can be accessed or changed.

Locked Indicates that no limits can be accessed or changed. A password is required to override limits or access the system.

Alt. Audio If this is highlighted when watching a digital terrestrial or a DIRECTV channel, more than one audio language is available. If you select this, you will hear the language, and the language name will appear in the channel banner. You will activate the language for the current channel (all other channels remain unaffected).

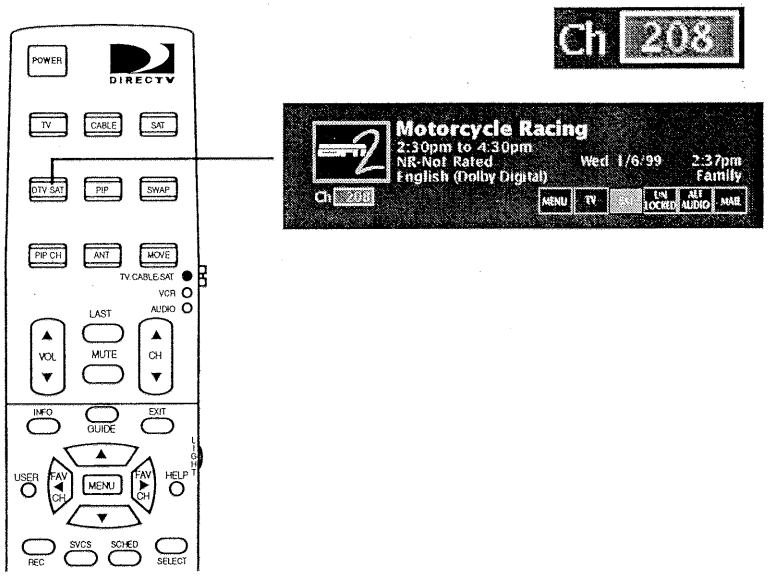
Mail Indicates that you have a message in your mailbox from your programming provider. Select this to access the mailbox and read your mail. If you do not subscribe to DIRECTV® programming, this option will be absent.

Press INFO on the remote control twice to view an expanded channel banner that shows a program description (when available).

CHANGING BETWEEN DIRECTV AND TV MODE

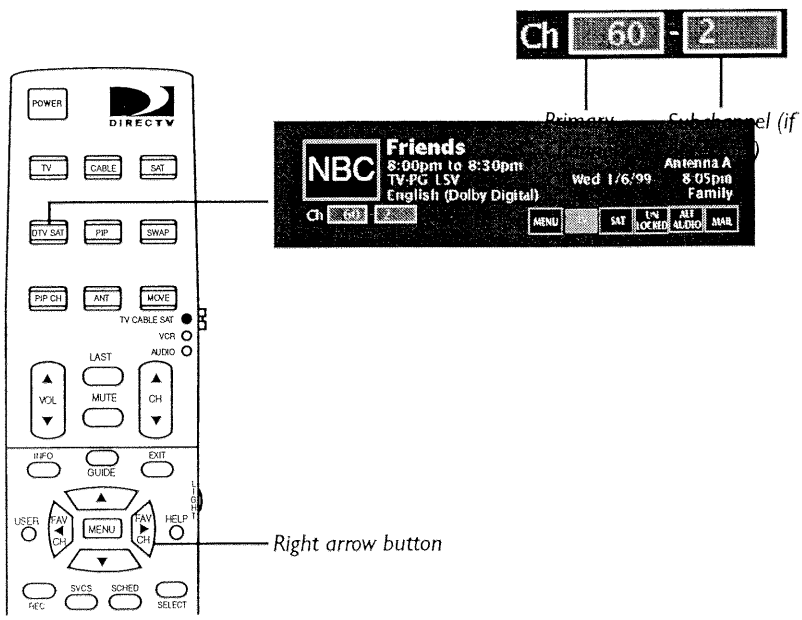
When you change channels by entering numbers with the remote control, you tune to programming that can come from one of three different sources: the DIRECTV satellite (if you have DIRECTV service), a terrestrial off-air antenna, or cable TV. You tune to one of these sources by pressing the DTV/SAT button on the remote control; then you can enter the channel numbers. The diagrams below show how your remote control communicates with the three sources.

In **SAT mode**, you tune to channels that come from DIRECTV (if you subscribe to DIRECTV® programming). Enter channel numbers that are three or four digits long. Then press SELECT to tune.



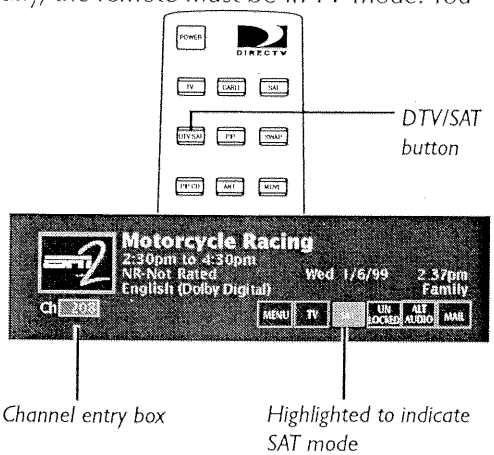
In **TV mode**, you tune to channels that carry the terrestrial off-air or cable TV signal.

- To tune to a digital channel, enter channel numbers that are one, two, or three digits long. If necessary, press the right arrow and enter a subchannel number. These numbers appear in the box to the right of the primary channel number. Press SELECT to tune.
- To tune to an analog channel, enter channel numbers that are up to three digits long. Press SELECT to tune.



CHANGING CHANNELS

To change channels by entering numbers with the remote control, the television needs to be in the correct "mode": either SAT mode (if you subscribe to DIRECTV® programming) or TV mode. Additionally, the remote must be in TV mode. You can set the remote to TV mode by pressing the TV button.



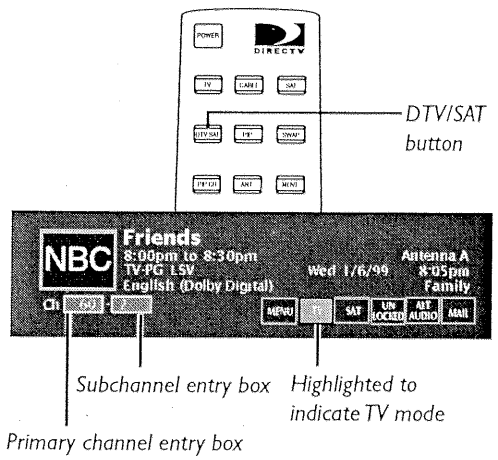
When you want to watch DIRECTV® programming, put the television in SAT mode

1. Make sure you are in SAT mode by pressing DTV/SAT on the remote control, until SAT is highlighted in the channel banner.
2. Enter the channel number and press SELECT. The channel numbers are three or four digits long. If you do not enter at least three digits, "???" will appear in the channel entry box, and the system will wait for a valid entry.

When you want to watch a digital or analog TV channel, put the television in TV mode

If you want to watch a digital channel:

1. Make sure you are in TV mode by pressing DTV/SAT on the remote control, until TV is highlighted in the channel banner.
2. Enter the primary channel number. This number will appear in the primary channel entry box. If there is no subchannel, press SELECT.
3. If the primary channel number has fewer than three digits and you want to enter subchannel numbers, press the right arrow to advance to the subchannel entry box.
4. Enter the number of the subchannel. This number will appear in the subchannel entry box.
5. Press SELECT on the remote control to tune to the channel.



If you want to watch an analog channel:

1. Make sure you are in TV mode by pressing DTV/SAT on the remote control, until TV is highlighted in the channel banner.
2. Enter the channel number. This number will appear in the primary channel entry box. (Analog channels don't have subchannels.)
3. Press SELECT on the remote control to tune to the channel.

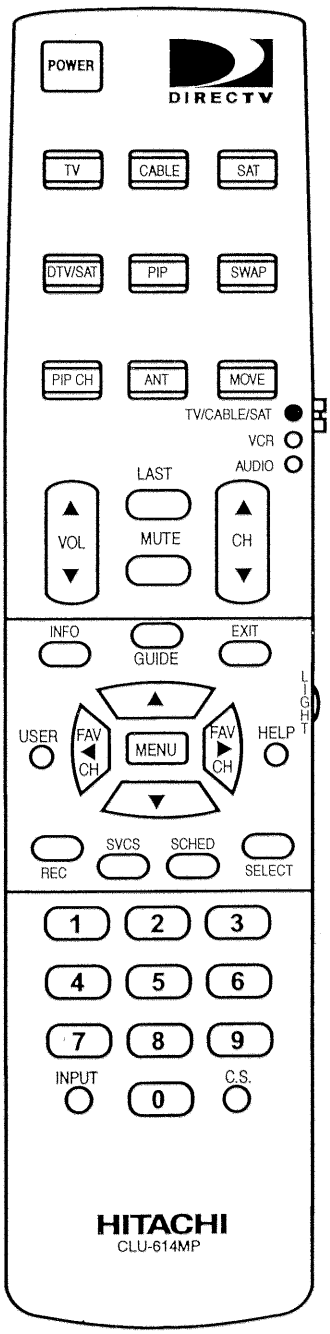
Note that you can always use the channel up and down buttons on the remote control to change channels within the SAT and TV modes.

PIP (PICTURE-IN-PICTURE) OPERATION

The PIP (picture-in-picture) feature lets you display a second, smaller analog (NTSC format) picture on top of the main analog picture.

Your TV is equipped with a dual NTSC tuner that tunes to cable or off-air television signals. You will only be able to use the PIP window and main picture with analog channels.

Note that you will only be able to use PIP with analog channels.



PIP BUTTONS

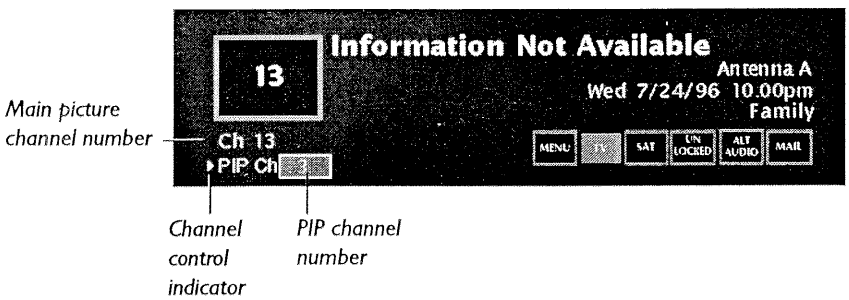
There are certain remote buttons that control the way the PIP window works:

PIP Brings up the PIP window. Press PIP again to remove the window.

MOVE and Arrows Let you move the PIP window to different areas of the screen.

SWAP Switches, or "swaps," the video from the PIP window with the main picture.

PIP CH (PIP Channel) Lets you switch channel control between the PIP window and the main picture. To determine whether you are controlling the PIP or the main picture, look at the channel banner as you change channels. The triangular indicator is beside the channel number for the picture you're controlling.



USING THE PIP FEATURE

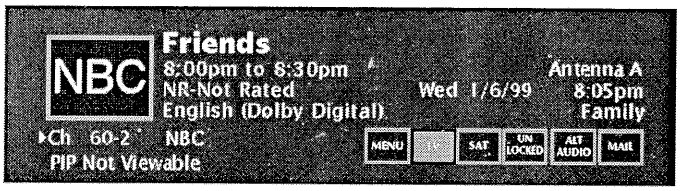
While you may use PIP in different ways, this basic PIP scenario should get you started. When watching an analog channel, follow these steps.

1. Press the PIP button on the remote control. The PIP window appears on the screen.
2. Use the channel up and down or digit buttons to change the PIP channel.
3. To change the program in the main picture window, press PIP CH. Then use the channel up and down or digit buttons.

To go back and forth between controlling the PIP window and the main picture, press the PIP CH button.

PIP PROBLEMS?

- If you are channel surfing and the PIP disappears, you may have tuned to a digital channel. To view PIP and the main picture, make sure that both the main and PIP channels are analog inputs, or signals. Continue changing the channel until you find an analog (NTSC format) channel. The PIP window will reappear.

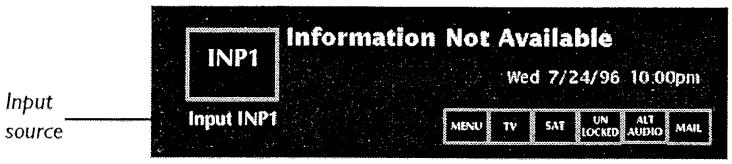


The message "PIP Not Viewable" in the channel banner lets you know that PIP is not available on this channel and you should tune to another channel.

- If you press PIP and the PIP box is grayed, you may have movie or TV rating limits set. These limits may block your access to the PIP channel. For information on removing limits, see the section "Using the Profiles."
- If the PIP window disappears when closed captioning is displayed or you press the MUTE button on the remote control, you have a conflict in your settings. You cannot view PIP when parental controls have blocked the current program or closed captioning is displayed. In order to view PIP, either unlock parental controls or change the closed captioning setting.
- You cannot view closed captioning in the PIP window.

USING THE INPUT BUTTON

1. Repeatedly press the INPUT button to scroll through the available input sources until you find the input associated with the component (such as VCR or DVD player) you want to view.

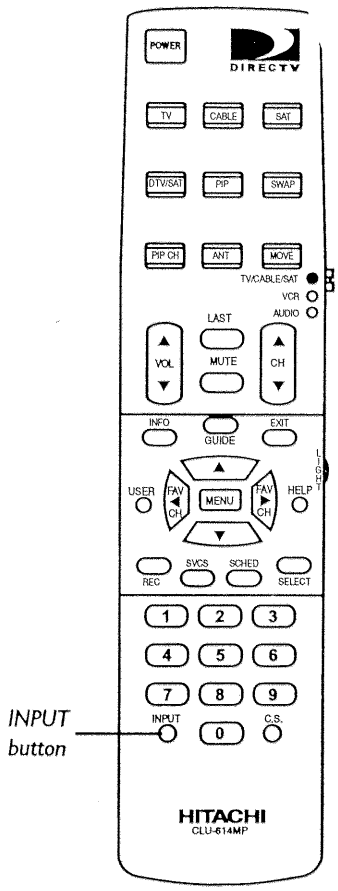


Watch the channel banner to see the input sources change with each press of the INPUT button.

2. Once you have found the input source you want, stop pressing INPUT.
   - If you tune to INP1 and your VCR is connected to that input, you will be able to view your VCR. To play, stop, or rewind the VCR tape using the remote that came with your TV, you must first slide the multi-page switch on the side of the remote to VCR to put the remote control in VCR mode.

There are other ways of selecting an input channel:

- Program the component (VCR, DVD, etc.) to automatically tune to the correct input channel when it is first turned on. See the section in this book, "System Options and Preferences" for information on Auto Link.
- After pressing INPUT on the remote, enter the digits 1, 2, 3, or 4 then press SELECT to tune to (S)INP1, 2, 3, or 4, respectively.



Press INPUT then GUIDE on the remote control to view a guide-like list of your line inputs and corresponding channels.

USING THE PROGRAM GUIDES

What is a program guide?

A program guide is an on-screen programming schedule. It is a list of the current and future programs. There are separate guides for TV programs and DIRECTV programs (available if you subscribe to DIRECTV® programming).

Both of these guides can be viewed in different formats.

Using the program guides is easy as long as you remember to highlight items on the screen by pressing the arrow buttons on the remote control. Then, press SELECT to tune to that channel.

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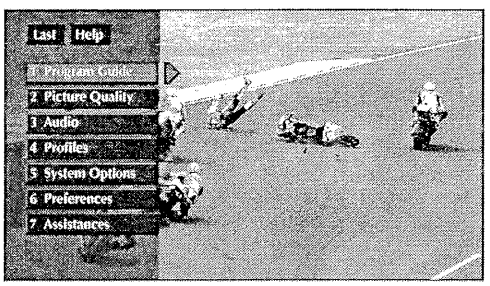
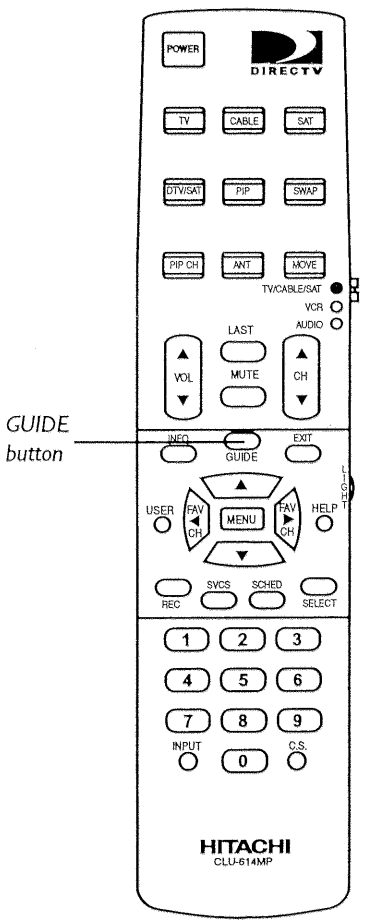
BRINGING UP THE PROGRAM GUIDES

If you subscribe to DIRECTV® programming, you have access to two program guides: a DIRECTV program guide and a TV program guide (for terrestrial programming). If you do not subscribe to DIRECTV programming, you will have one guide: the TV program guide.

You can access the program guides by:

- Pressing MENU on the remote control and selecting *Program Guide*.
- Pressing the GUIDE button on the remote control.



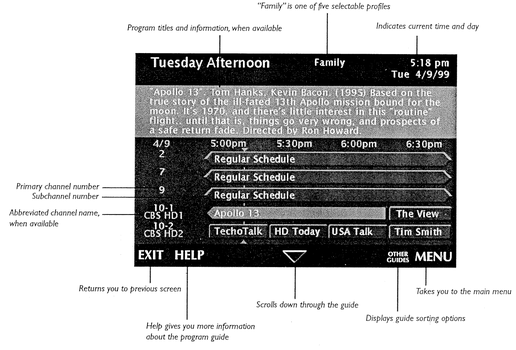


Note that when you access a program guide, you view the guide corresponding to the "mode" you are in. For example, if you are in SAT mode and press the GUIDE button, you will view the DIRECTV program guide. Similarly, if you are in TV mode and press the GUIDE button, you will view the TV program guide.

If you are viewing the TV program guide and would like to view the DIRECTV guide, press DTV/SAT on the remote control to change "modes" and view the other guide.

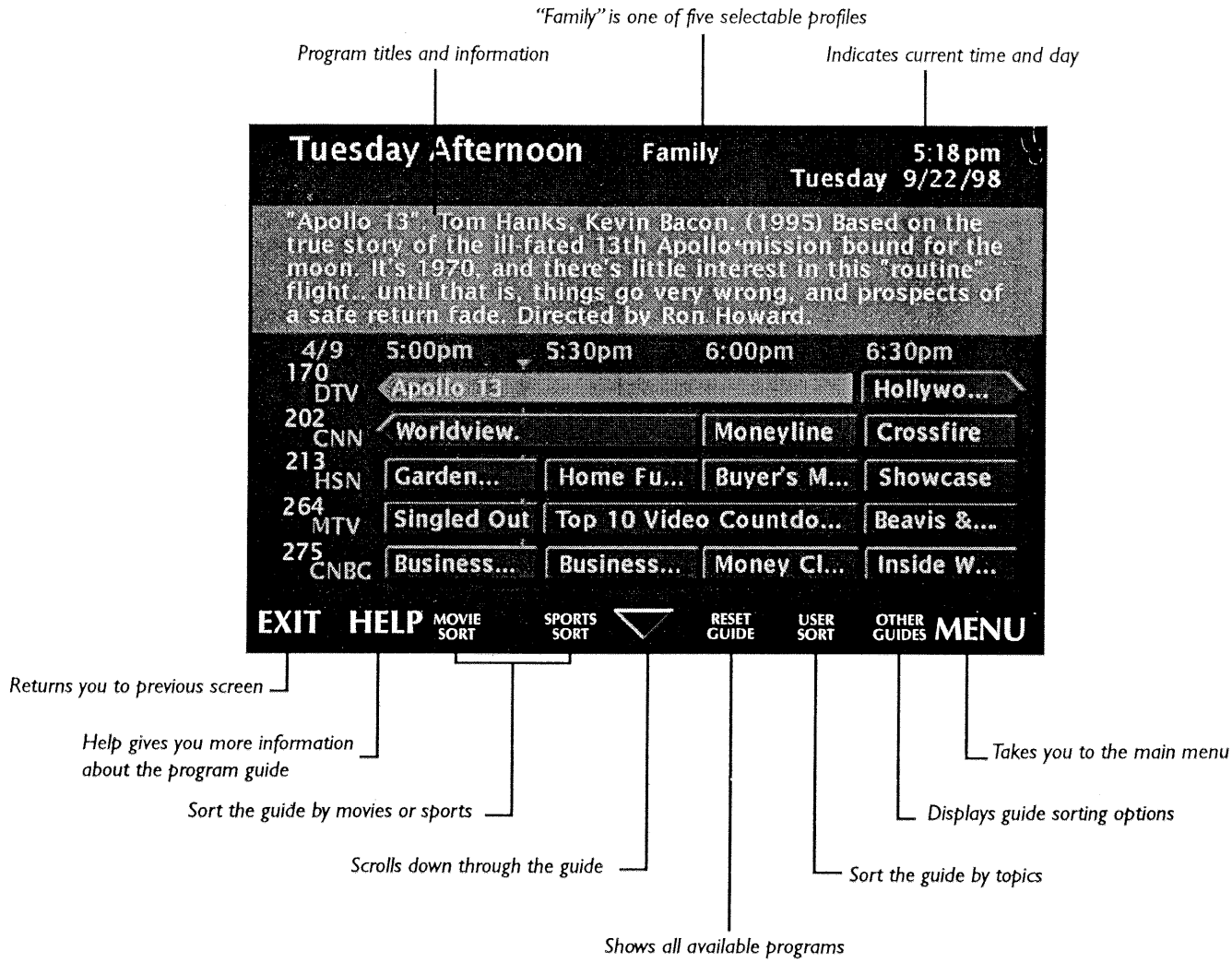
ANATOMY OF THE TV PROGRAM GUIDE

To access the TV program guide, press the DTV/SAT button on the remote control until ANTENNA A or ANTENNA B is displayed in the channel banner, then press GUIDE on the remote control. The following diagram shows you the kind of information you will see in the TV program guide. Note that the availability of TV program titles and information is dependent upon information provided by local broadcasters.



ANATOMY OF THE DIRECTV® PROGRAMMING GUIDE

To access the DIRECTV guide, you must subscribe to DIRECTV service. Press the DTV/SAT button until DIRECTV is highlighted in the channel banner, then press GUIDE on the remote control. The following diagram shows you the kind of information you will see in the DIRECTV program guide.



GETTING AROUND IN THE GUIDES

There are several ways to change channels and move around the TV and DIRECTV program guides.

- **Point to channels with the number buttons (0-9)**
  You can quickly highlight any channel in the program guides by entering the channel number with the number buttons (0-9). For example, to highlight channel 228, press the numbers 2-2-8 and press SELECT on the remote control. To highlight channel 73, press 7-3 and SELECT.
- **Scroll channel by channel**
  The programs that you see on the TV screen make up one section—or page—of the total program guide. You can scroll to other sections using the arrows: highlight other times with the left and right arrows; highlight other channels with the up and down arrows.
- **Scroll page by page**
  If you want to scroll up or down through the program guides faster, press the channel up and down buttons on the remote control. The highlight scrolls a page at a time.

TUNING TO A PROGRAM

- To tune directly to a current program listed in a guide, highlight the program name and press SELECT.
- To see information about a program or channel in the guide, highlight the program or channel name and press INFO.

After you highlight a program name and press INFO, the Program Details screen appears and gives you several options.

Then, if the program is not a pay-per-view (PPV) program, you can select:

- *View Channel* to tune to that channel
- *Channel Guide* to see a program lineup for that channel
- *Other Times* to see what other times the program is available

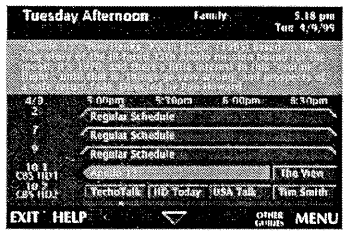
The options available to you may vary according to the type of program you select. If the program is PPV, you will have the option to buy the program.

USING THE GUIDE BUTTON

Each press of the GUIDE button on the remote control takes you to an alternate type of TV or DIRECTV® programming guide: Detail Guide, SurfGuide (DIRECTV only), or Grid Guide.

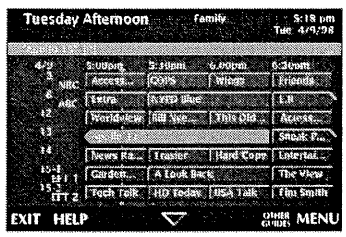
By default, the Detail Guide appears when you press GUIDE on the remote control. You can change the default guide from the Detail Guide to the Grid Guide or SurfGuide (DIRECTV only) using the following steps:

1. Select *Preferences* from the main menu.
2. Select *Default Guide*.
3. Use the arrows and SELECT to choose the guide you want to appear first when you press GUIDE. If SurfGuide is selected as the default guide, the Grid Guide will appear when you access the TV program guide, since SurfGuide isn't available as a TV program guide.



The TV Detail Guide

The DIRECTV SurfGuide



The TV Grid Guide

The Detail Guide

The Detail Guide shows five channels in a time-and-channel format, with program information for the highlighted program at the top of the guide.

The SurfGuide (DIRECTV only)

The SurfGuide displays seven DIRECTV channels in a half-hour time-and-channel format, if you subscribe to DIRECTV® programming. The full name of the program and its rating are listed at the bottom of the screen. Press the right arrow button to extend the SurfGuide to show the next two hours.

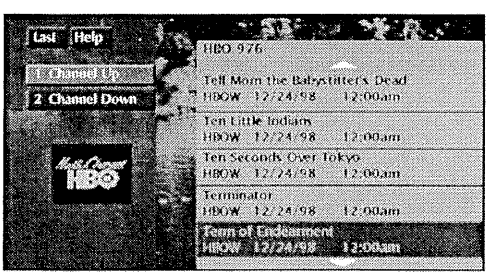
The Grid Guide

The Grid Guide shows seven channels in a time-and-channel format, with the full title of the highlighted program at the top of the guide.

THE OTHER GUIDES ITEM

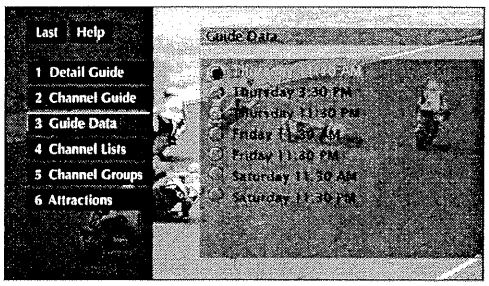
The *Other Guides* item at the bottom of the TV and DIRECTV® programming guides lets you sort the guides by different variables, such as by channels, data, channel lists, and channel groups. You can access these guides by highlighting then selecting the *Other Guides* item at the bottom of the Detail Guide and Grid Guide.

- **Channel Guide** Displays a channel's DIRECTV® or TV programming schedule in a channel-by-channel format.



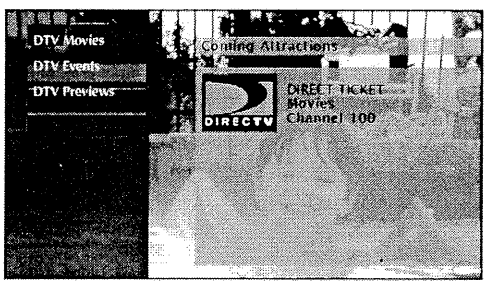
Channel Guide lets you see what programs are on a specific channel.

- **Guide Data** Shows you the future guides that are available and lets you select one to view in either the DIRECTV® or TV programming guide.



Guide Data shows you future guides.

- **Channel Lists** Displays a list of profiles. You can choose a profile from this list and the guide will display only the DIRECTV or TV channels which have been included in that profile's channel list.
- **Channel Groups** Lets you sort only the DIRECTV programming guide to include only channels that fall into the selected category. For example, you could sort the DIRECTV programming guide by pay per view movies that are available at a future time.
- **Attractions...** Displays a list of DIRECTV channels that show coming attractions and special events information.



The Attractions Guide shows coming DIRECTV events and programs.

You can highlight any program then tune to that channel or get more information by pressing the SELECT or INFO buttons.

EXITING A PROGRAM GUIDE

There are three ways to exit a guide:

- Highlight a channel and press SELECT.
- Highlight *Exit* and press SELECT.

SORTING THE DIRECTV® PROGRAMMING GUIDE

Sorting the guide is a way of organizing the DIRECTV programming guide to show only the types of programs that interest you. There are several on-screen buttons that sort the DIRECTV programming guide in different ways.

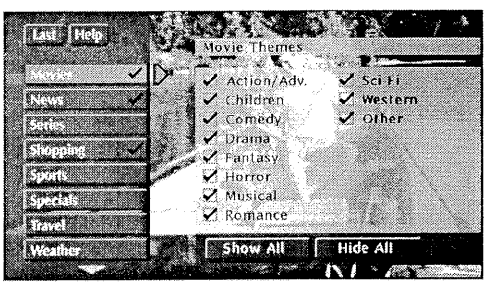
The Sorting items appear at the bottom of the Grid Guide and Detail Guide.

SORTING THE DIRECTV PROGRAMMING GUIDE BY TOPICS

The topics icon sorts the DIRECTV programming guide according to the current user's preferences. Select the topics icon to sort the guide.

After you select the user sort item, it changes to the topics themes icon. Select the topics themes icon to edit the current user's themes preferences. These preferences are saved in each user's profile.

Topics themes button



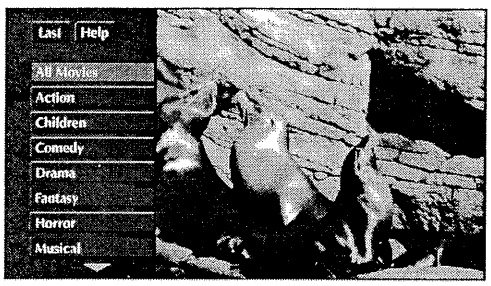
Checkmark the themes that interest you.

Select the topic categories, and checkmark the themes you would like to appear when you select the topics icon in the guides. Programming that fits the description of checkmarked themes will appear in the DIRECTV guide when you sort by the topics icon.

SORTING THE DIRECTV® PROGRAMMING GUIDE BY MOVIES

Select the movies sort item to tell the DIRECTV programming guide to list only DIRECTV movies.

Select the movies sort item to sort the guide to list movies by type, such as comedies or musicals.

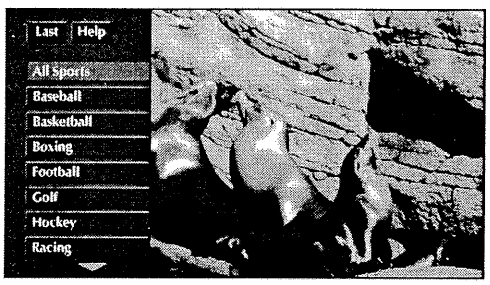


Select a Movies Theme that interests you.

SORTING THE DIRECTV PROGRAMMING GUIDE BY SPORTS

Select the sports sort item to tell the DIRECTV programming guide to list only DIRECTV sporting events.

Select the sports sort item to sort the guide to list sports by type, such as basketball or soccer.



Select a sports theme that interests you.

LISTING ALL DIRECTV PROGRAMMING

The reset guide item resets the DIRECTV programming guide to show all available topics, channels and listings for the current profile.

THE OTHER ITEMS

These items are located on both the DIRECTV® and TV programming guides.

Exit

Exits the guide and returns you to normal viewing on the current channel. Press SELECT to continue.

Help

Brings up additional information about the guide. Press SELECT to continue.

Down Arrow

The arrow icon allows you to scroll down through other channels in the guide. Point to the down arrow, and then press either SELECT or the down arrow on the remote to scroll down through the program guide.

Arrow icon

The Main Menu

Brings up the main menu. Press SELECT to continue.

ADJUSTING TV CONTROLS

The following section tells you how to adjust the picture quality and audio quality of your TV.

- The Picture Quality menu contains the controls that let you adjust the picture.
- The Audio menu contains the controls that let you adjust the way the audio sounds.

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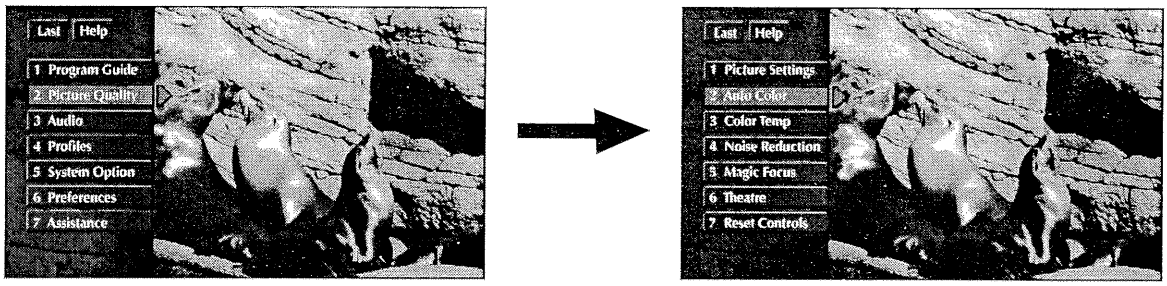
PICTURE QUALITY CONTROLS

The Picture Quality menu contains all of the TV's video configuration controls. To access the Picture Quality menu, press MENU on the remote control to go to the main menu, then select *Picture Quality*.



PICTURE SETTINGS

The Picture Settings menu displays the controls for adjusting the way the picture looks. The picture settings you specify apply to your current mode. Use the left and right arrow buttons on the remote control to move the slider to the desired position. Then select *Exit* when you are finished.

Your options under the Picture Settings menu are:

- **Contrast** Adjusts differences between the light and dark areas of the picture.
- **Color** Adjusts the richness of the color.
- **Tint** Adjusts the balance between the red and green levels.
- **Brightness** Adjusts the brightness of the picture.
- **Sharpness** Adjusts the crispness of edges in the picture.

You can have six different picture settings: one for analog channels, one for digital channels (including DIRECTV channels), and one for components attached to INPUT 1, 2, 3, and 4 (FRONT).

To make settings for analog and digital channels:

1. Enter the "mode" for which you would like to apply the setting (for example, press DTV/SAT).
2. Then press MENU.
3. Select *Picture Quality*, and then select *Picture Settings* to set picture settings for digital terrestrial and DIRECTV channels.

To make settings for the components connected to INPUT 1, 2, 3, or 4 (FRONT), take the following steps:

1. Press INPUT on the remote control until the input that corresponds with the component you want to make settings for appears in the channel banner. (For example, if your DVD player is connected to INP1, stop pressing INPUT when INP1 appears.)

2. Then press menu.
3. Select Picture Quality, and then select Picture Settings to set picture settings for the desired input.

Depending upon which Screen Format you select, it may be necessary to activate Magic Focus twice. If Magic Focus is activated while in Normal/Full/Fill mode, the convergence will be corrected. However, you must again activate Magic Focus when you select Smooth Wide mode, to correct convergence. See page 78 for information.

AUTO COLOR

Auto Color displays a choice list that lets you turn on the feature that automatically corrects the color of the picture when you are viewing analog channels. This is especially useful for tracking realistic flesh tone colors as you switch from channel to channel. Choose *On* or *Off*, depending on your preference.

COLOR TEMP

Color Temp displays a choice list that lets you set one of two automatic color adjustments: *Cool* for a more blue palette of picture colors, and *Warm* for a more red palette of picture colors. The warm setting corresponds to the NTSC standard of 7500°K and the cool setting corresponds to 9300°K.

NOISE REDUCTION

You can turn Noise Reduction on or off. When turned on, the television produces a cleaner, smoother picture by reducing picture "static" or any type of interference. This is especially useful for providing a cleaner picture in weak analog signal conditions. When Noise Reduction is on, picture detail is somewhat decreased.

MAGIC FOCUS

Selecting *Magic Focus* begins a process which aligns the blue, green, and red picture tubes to produce the best picture quality. These tubes may have shifted since it was manufactured. If your picture seems fuzzy or has a yellow tint, running Magic Focus could fix this problem.

While running Magic Focus, you may notice that flashing letters change to dashes to indicate progress. The Magic Focus process takes several minutes.

THEATRE

Theatre allows you to set picture quality controls to a predetermined setting suitable for a theatre-type environment, such as a dark room. You may want to turn the Theatre option on when viewing movies because the color temperature of movie film has a red tint, lower contrast, and reduced sharpness that live video does not. Selecting the Theatre option causes the picture to approach the "look" of an actual film.

When *Theatre* is selected:

- picture controls are dimmed for a low light setting
- auto color is turned on
- color temp is set to warm
- noise reduction is turned on

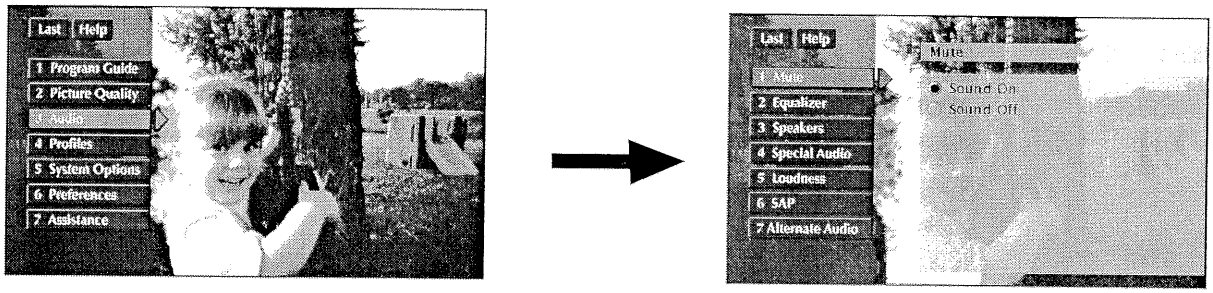
RESET CONTROLS

Allows you to reset all picture quality controls to their original defaults.

ADJUSTING TV CONTROLS

AUDIO CONTROLS

The Audio menu lets you adjust the controls that involve the TV's audio outputs. To access the Audio menu, press MENU on the remote, then select *Audio* from the main menu.



MUTE

Turn Mute on (select *Sound Off*) to set the TV's volume to its minimum level. The same can be accomplished by pressing MUTE on the remote control.

EQUALIZER

Equalizer allows you to separately adjust the front and center audio frequencies.

Select which speakers you would like to adjust—front or center. Then use the right and left arrows to select a band of frequency, and use the up and down arrows to adjust the band of frequency to the level you desire. To return to the previous menu, select *Last* when you are finished and press SELECT.

SPEAKERS

The Speakers menu lets you specify the type of speakers and volume levels you would like to use. From this menu, you have the following options:

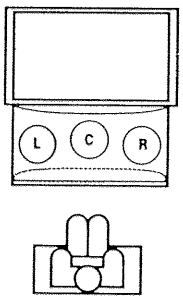
Speaker Setup Displays a list of speaker options describing the various ways you can use internal and/or external speakers. From this list, choose the one that matches the way you have set up your speakers. This menu allows you to control the speaker outputs without using external switches. Choose from the following options:

Your selection in the Speakers menu determines what options will be available under the Special Audio-Audio Processor menu. The Audio Processor menu allows you to choose whether you want to receive mono, stereo, Dolby 3, or other sound qualities.

For information on connecting external speakers to your HDTV, see the section "Setup and Connections."

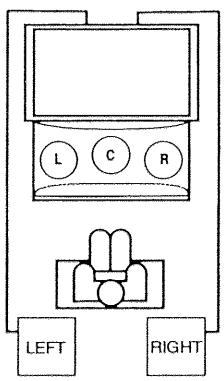
ADJUSTING TV CONTROLS

Internal TV Only Choose this option if you do not want to use any external speakers and want all the sound to come from the TV's internal speakers. Make sure to turn the back panel's INT./EXT. Front Speaker switch to INT.



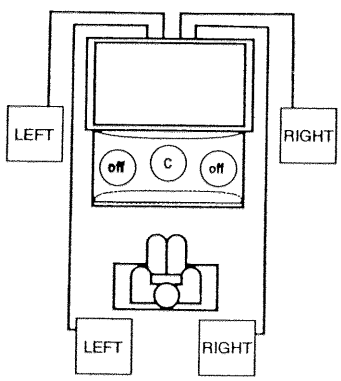
Internal TV Only

Internal TV and Rear Choose this option if you want the sound to come from the TV's internal speakers and the external rear speakers you have connected to the TV. Make sure to turn the back panel's INT./EXT. Front Speaker switch to INT.



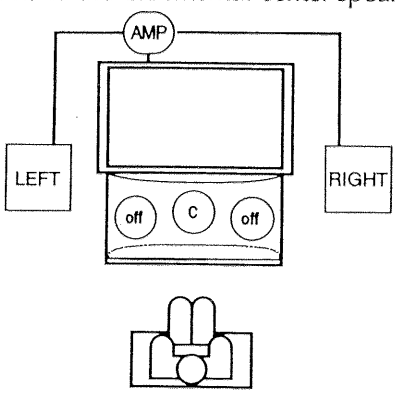
Internal TV & Rear

External Speakers w/TV Center Choose this option if you want to use only the TV's internal center speaker and external front and rear speakers you have connected to the TV. Make sure to turn the back panel's INT./EXT. Front Speaker switch to EXT.



External Speakers w/ TV Center

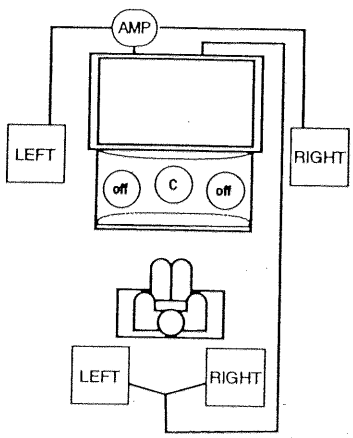
External Front w/ Amp w/TV Center Choose this option if you would like to use external front speakers and a separate amplifier you have connected to the TV and would also like to use the internal center speaker in the TV.



Ext. Front w/ Amp & TV Center

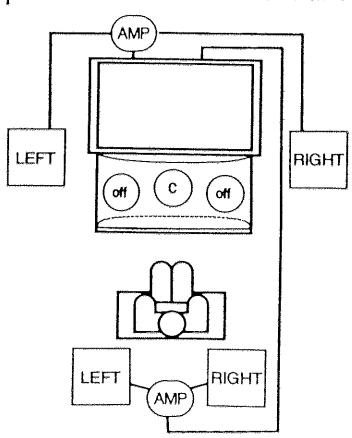
When you select *Sound Check*, you will hear a burst of noise emitted from each speaker you have set up. The on-screen display will show which speaker should be emitting the burst of noise.

Ext. Front w/Amp & Rear w/TV Center Use this option if you would rather use external front speakers with a separate amplifier you have connected to the TV, rear speakers, and the internal center speaker in the TV.



External Front w/Amp & Rear w/ TV Center

Ext. Front & Rear w/ Amp w/TV Center Choose this option if you would like to use the external front speakers with a separate amplifier, external rear speakers with a separate amplifier as well as the internal center speaker in the TV.



Ext Front and Rear w/ Amp & TV Center

Audio Output Displays a choice list of available audio output modes, which determine how volume will be controlled through the output jacks.

- Fixed Output Fixed audio mode provides a fixed output control level from the TV's audio output jacks to an external device such an external sound amplifier. With the fixed audio mode, the TV's volume control, tone controls, and mute are disabled. You must use the amplifier's remote control to change volume.
- Variable Output Variable audio mode allows a variable output control level from the TV's audio output jacks. If the volume changes on the TV via the volume buttons on the remote control or front panel, the output volume changes as well.

For more information on the variable and fixed audio jacks, see the section "Setup and Connections" under "Back of the TV" and "Connecting a Stereo Amplifier."

Test Tone Tests the front, rear, and center speakers to make sure all channels are working and are properly connected to the correct speakers.

Front Balance Allows you to adjust the sound balance between the left front and right front channels.

Rear Volume Lets you adjust the rear output volume level.

Rear Balance Allows you to adjust the sound balance between the left rear and right rear channels.

Center Volume Lets you adjust the center output volume level.

Subwoofer Vol Lets you adjust the volume coming from the subwoofer jack.

SPECIAL AUDIO

Audio Processor Displays a choice list of available audio modes, which control the way the sound comes through your speakers. Depending on your speaker setup, any combination of the following options will appear:

- *Mono* Plays the sound in mono only, and outputs sound from the front left and right speakers only. This is a good choice when receiving broadcasts where distance from the broadcasters makes the stereo signal weak. The channel banner displays the word Mono when you tune to a program that is broadcast in mono.
- *Stereo* Splits the incoming stereo audio signal into left and right front channels. Most TV programs and recorded materials have stereo audio. The channel banner displays the word Stereo when you tune to a program that is broadcast in stereo.
- *Dolby 3* Splits the incoming audio signal into front left, right, and center channels. The channel banner displays the words Dolby Digital when you tune to a program that is broadcast in Dolby Digital.
- *Pro Logic* Splits the incoming audio into left, right, center, and rear channels. You must connect rear speakers to hear the rear (surround) channel sound. This is a good choice for movies and TV programs broadcast in Dolby Surround.
- *Hall Surround* Splits the incoming audio signal into left, right, and rear channels. Extra delay is added to the rear channels to simulate a concert hall sound effect.
- *Matrix Surround* Splits the incoming audio signal into left, right, and simulated rear channels. You must connect rear speakers to hear the rear (surround) channel sound. This is a good choice when you're listening to monophonic audio, such as speeches, sporting events, or plain dialog and wish to have sound coming from all channels.

Optical Output Select *Auto Select* if your TV is connected to a Dolby Digital and PCM decoder. Select *Dolby Digital* if the TV is connected to a Dolby Digital only decoder; it will provide six independent soundtrack channels through the optical output jack (labeled DIGITAL AUDIO OUT). Select *PCM* if it is connected to a PCM only decoder; it will then provide two independent soundtrack channels. Select Off if you want no audio output provided.

When the TV is connected to an optional, compatible six-channel amplifier/ receiver and speakers via the DIGITAL AUDIO OUT jack on the back panel, you receive Dolby Digital Surround Sound, if transmitted. Use the Optical Output menu to specify Auto Select, PCM, Dolby Digital, or Off.

Perfect Volume Monitors a program's audio track and limits volume excursions to a minimum and maximum volume range from the current volume setting. Acting like a dynamic range limiter, it compresses the dynamic range to limit sudden volume increases, like when a commercial begins.

Dynamic Bass Brings the bass level up by +6dB.

Transmitter Out Allows you to choose between three possible variable audio outputs for a separate set of wireless speakers, stereo amplifier, wireless headphones, or whatever component you have connected to the TRANSMITTER OUT jack on the back panel. You can choose from the following output selections:

- Front Speakers Tells the TV that you've set up your wireless speakers in the front of the room. Your system will then play the "front speaker" audio stream through the wireless speakers.
- PIP Audio If you choose PIP (picture-in-picture) Audio, your wireless transmitter (e.g. speakers or headphones) will play the PIP audio program. If no PIP is displayed, the wireless transmitter will play the main channel audio program.
- Rear Speakers Tells the TV that you've set up your wireless speakers in the rear of the room. Your system will then play the "rear speaker" audio stream through the wireless speakers.

Center Delay Allows you to set delay of center audio signal.

Surround Delay Allows you to set delay of surround audio signal.

LOUDNESS

When turned on, loudness allows the setting of the volume control to also control the output frequency response. High and low frequencies are boosted at lower volume levels.

SAP

When turned on, Second Audio Program (SAP) plays the program's audio in a second language, if one is available. SAP is also used to broadcast a program's audio with descriptions of the video for the visually impaired. SAP is broadcast in mono and is not available for digital programs.

ALTERNATE AUDIO

The Alternate Audio menu lets you choose the default audio language you want to hear when it is available. The system will automatically set the audio program to the selected audio language when the channel you are viewing is either a DIRECTV or a digital channel and the specified language is available. Highlight the audio language you want using the up and down arrows, then press SELECT.

You will find an Alt Audio item in the channel banner. When this item is highlighted, it indicates that a Second Audio Program (SAP) is available for analog programs. If you select it when highlighted, you will activate the SAP for the current channel (all other channels remain unaffected). If the item is highlighted when watching a digital channel or a DIRECTV channel, more than one audio language is available. If you select the icon, you will hear the language and the name will appear in the channel banner.

USING THE PROFILES

This section describes the user profiles feature. It includes information about:

- creating a profile's TV and DIRECTV viewing lists.
- setting spending limits.
- setting DIRECTV® programming, TV, and movie rating limits.
- blocking unrated TV programs.
- locking and unlocking a profile.

1 SETUP AND CONNECTIONS

2 BASIC TV OPERATION

3 USING THE REMOTE

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5 ADJUSTING TV CONTROLS

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8 GETTING ASSISTANCE

9 REFERENCE

USING THE PROFILES

ABOUT PROFILES

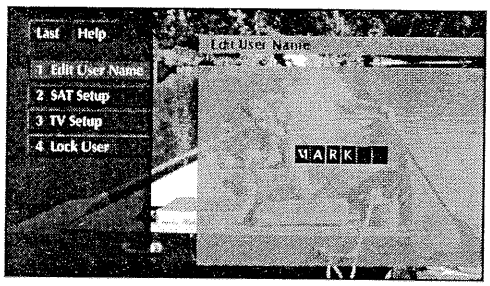
When you select *Profiles* from the main menu, you can create four different profiles in addition to the default "Family" profile. You can set up specific channels, rating limits, and spending limits for each profile. After you've set up these profiles, press the USER button on the remote control to scroll through your profiles and access a certain one.

But first, personalize a profile by entering a name.

1. Select *Profiles* from the main menu.
2. Select a profile to edit: *User 1*, *User 2*, *User 3*, or *User 4*.
3. Select *Edit User Name* from the next menu.
4. Use the up, down, and right arrows on the remote control to find and select a letter.

Use the MENU button on the remote control to bring up the main menu, use the arrows to highlight an option, and press SELECT to select it.

If the main menu does not appear, the remote control might not be in TV mode. Make sure the multi-page switch on the side of the remote is set to TV/CABLE/SAT, then press the TV button and then MENU.



You can personalize each profile.

To continue editing the profile, select *SAT Setup* (if you have ordered DIRECTV® programming) or *TV Setup*. The following sections describe how to set up these features.

THE SAT SETUP

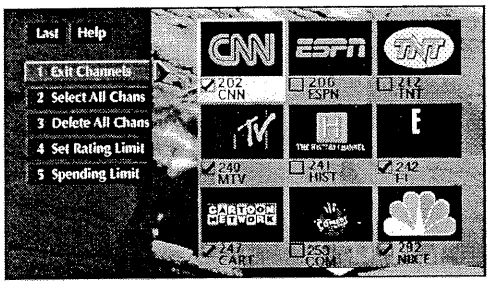
The SAT Setup menu item only exists if you subscribe to DIRECTV® programming. Through this menu you can establish DIRECTV channel lists, set spending limits, and set rating limits for DIRECTV programs using the SAT Setup menu.

You can also set up profiles as categories instead of as users. For example, name a profile "Sports" and include only sports channels in the profile. Or, name it "Movies," include only movie channels, and set a rating and spending limit for yourself or your family.

EDITING CHANNELS IN A DIRECTV LIST

You should create a DIRECTV channel list to establish which SAT channels the selected profile can access. To create the DIRECTV channel list:

1. Highlight and select a user name, then select *SAT Setup*.
2. Highlight *Edit Channels* and press SELECT.



Check the channels you want to include in the list.

3. Use the arrow buttons to point to a DIRECTV channel, and press SELECT to remove (or replace) the check mark.

Checkmarked items appear in the DIRECTV channel list. In other words, when you select that profile and begin surfing through DIRECTV channels with the channel up and down buttons, only the checkmarked channels will appear as you surf.

SELECTING OR DELETING ALL DIRECTV CHANNELS

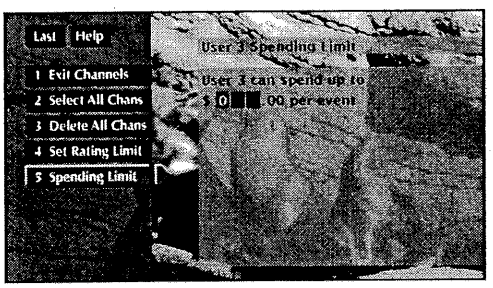
You might be able to save time when creating a DIRECTV channel list by using the *Select All Chans* option or the *Delete All Chans* option to either add or delete all channels before removing or adding individual channels.

Also, DIRECTV program providers may make additional channels available. To prevent new channels from appearing in a profile channel list, choose *Delete All Chans* and checkmark only the channels you want to appear in the list.

SETTING THE DIRECTV SPENDING LIMIT

Use the *Spending Limit* option to indicate a profile's per-event spending limit for pay per view (PPV) programs. To set the spending limit, choose the user profile name, select *SAT Setup*, then follow these steps:

1. Highlight *Spending Limit,* and press SELECT.



You can set a per-event spending limit for each profile.

2. Use the digits or the arrow buttons on the remote control to enter a single-program spending limit.

Tip

You can also access spending limits by selecting *System Options* from the main menu and then selecting *Purchases*. You can then select *Spending Limit* and set limits for each user.

3. Lock the system. See "Locking the System" near the end of this section for details.

After a spending limit is set and the system is locked, you must enter a password to purchase a pay per view program that costs more than your spending limit allows. The system will then temporarily unlock the limits you have set until the power is turned off. When the system is turned back on, the system will be locked again.

Important!

You need to lock the system in order for rating limits, channel limits, and spending limits to go into effect.

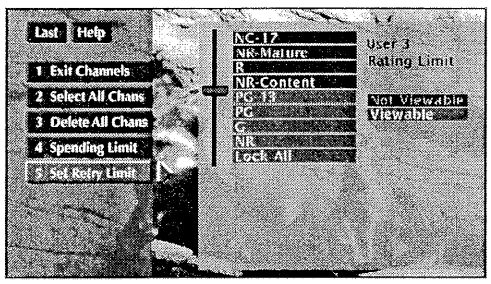
To edit the limits after you lock the system, you need to enter the system password. See "Locking the System" for details.

SETTING THE DIRECTV RATING LIMIT

The Set Rating Limit menu enables you to set a maximum viewing limit for rated DIRECTV® programming.

- Note that the ratings limit cannot be enforced if a DIRECTV program has not been rated, if rating information for that program is not transmitted by the program provider, or if the system has not been locked.

1. Select a user.
2. Select *SAT Setup*.
3. Highlight *Set Rating Limit* and press SELECT.



Use the arrow buttons on the remote control to move the selector up and down.

4. Use the up and down arrows to move the rating selector to the highest rating you want to be able to view. In the preceding illustration, movies that are rated up to and including a PG-13 rating can be viewed.

After the rating limit is set and the system is locked, you must enter the system password to watch programs with a rating higher than the limit. The system will then temporarily unlock the limits you have set until the power is turned off. When the system is turned back on, the system will be locked again.

Please note that the rating limit you set while in the SAT Setup menu apply only to DIRECTV programs—they do not apply to TV programs.

To set limits for TV programming, select a profile, select *TV Setup* and then select *Set TV Rating* or *Set Movie Rating*.

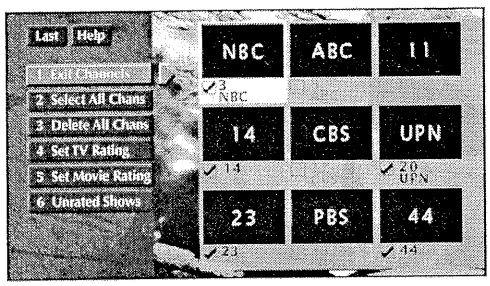
THE TV SETUP

You can establish TV channel lists, set spending limits, and set rating limits for TV programs using the TV Setup menu.

EDITING CHANNELS IN A TV LIST

You should create a TV channel list to establish which TV channels (including both analog and digital) the selected profile can access. To create the TV channel list:

1. Select a user.
2. Select *Edit Channels*.



To start, you can add or delete all channels.

3. Use the arrow buttons to highlight a TV channel, and press SELECT to remove (or replace) the check mark.

Checkmarked items appear in the channel list. In other words, when you select that profile and begin surfing through TV channels, only the checkmarked channels will appear as you surf. Note that the only channels you can add to a list are ones that were found during the channel search (see the "Getting Assistance" section in this book for details on searching for channels).

SELECTING OR DELETING ALL TV CHANNELS

You might be able to save time when creating a TV channel list by using the *Select All Chans* option or the *Delete All Chans* option to either add or delete all channels before removing or adding individual channels.

Also, terrestrial program providers may make additional channels or subchannels available. To include new channels in your TV channel list:

1. Select *System Options* from the main menu, then select *Auto Chan Set*. The system will run a channel search, making it aware of the new channel(s).
2. Select *Profiles* from the main menu.
3. Select the user profile name, then *TV Setup*.
4. Choose *Edit Channels* and checkmark the new channel.

Don't forget about the EXIT button.

Press the EXIT button on the remote control to remove the on-screen menus and return to normal viewing.

SETTING THE TV RATING

The Set TV Rating menu enables you to program your TV so children cannot see certain programs or channels.

The last three choices in the TV Setup menu involve software inside your TV (often called V-Chip) which allows you to "block" TV programs and movies based on violence, sex, or other content you may believe children should not view. In other words, it lets you program your TV so it will not display certain programs. Once you block programs, you or other adults are not limited to only parent-approved programs; you can "unblock" programs by entering the system password.

The V-Chip software inside your TV is initially turned "off," so if you choose not to implement it, you can just ignore it.

When turned "on," the V-chip software reads a code that most broadcasters send with programs. That code tells the V-Chip software the program's age-based rating (TV-MA, TV-14, etc.) and content themes (Violence (V), Adult Language (L), etc.). If you have blocked the rating or content themes that the program contains, you will receive the message, "Program exceeds the TV rating limit you set," when you turn to that particular channel. Broadcasters are not required to provide ratings. However, you can block out programs that have been given a rating of "Not Rated," and programs that are considered "unrated" because no code has been sent by the broadcaster.

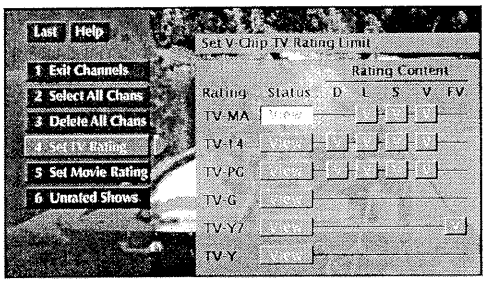
The TV age-based ratings and content themes you can block are listed in the table below.

Age-Based Rating	Description and Content Themes for Age-Based Ratings
TV-MA	Mature Audience Only. Specifically designed to be viewed by adults and may be unsuitable for children under 17. It contains one or more of the following content themes: **crude indecent language (L), explicit sexual activity (S), or graphic violence (V).**
TV-14	Parents Strongly Cautioned. Contains some material that many parents would find unsuitable for children under 14. Parents are strongly urged to exercise greater care in monitoring this program and are cautioned against letting children under the age of 14 watch unattended. This program contains one or more of the following content themes: **intensely suggestive dialogue (D), strong coarse language (L), intense sexual situations (S), or intense violence (V).**
TV-PG	Parental Guidance Suggested. Contains material that parents may find unsuitable for younger children. Many parents may want to watch it with their younger children. The program contains one or more of the following content themes: **some suggestive dialogue (D), infrequent coarse language (L), some sexual situations (S), or moderate violence (V).**
TV-G	General Audience. Most parents would find this program suitable for all ages. It contains **little or no sexual dialogue (D), no strong language (L) or situations (S), and little or no violence (V).**
TV-Y7	Directed to Children 7 years and older. Designed for children ages 7 and above. It may be more appropriate for children who have acquired the developmental skills needed to distinguish between make-believe and reality. Themes and elements in this program may include mild **fantasy violence (FV)** or comedic violence, or may frighten children under the age of 7.
TV-Y	All Children. Themes and elements in this program are designed for a young audience, including children from ages 2-6. It is not expected to frighten younger children.

USING THE PROFILES

To set TV programming limits:

1. From the main menu, select *Profiles*.
2. Select the user name you would like to set limits for through the *Profiles* menu.
3. Select *TV Setup* from the next menu.
4. Select *Set TV Rating*.



Selecting TV Rating allows you to set a limit for TV programs based on rating and content.

Once you get to the Set TV Rating screen, use the arrows and SELECT buttons on your remote control to change the status of a TV program rating from *View* to *Block*. The following sections give you more details about how to change the status of TV program limits.

Remember you are only blocking TV programs and movies for the one Profile you select in the Profiles menu. If you would like to block different programs for different users, be sure to complete the process for each of them.

You must remember to lock the system for rating limits to take effect.

THE RATING LIMIT SCREEN

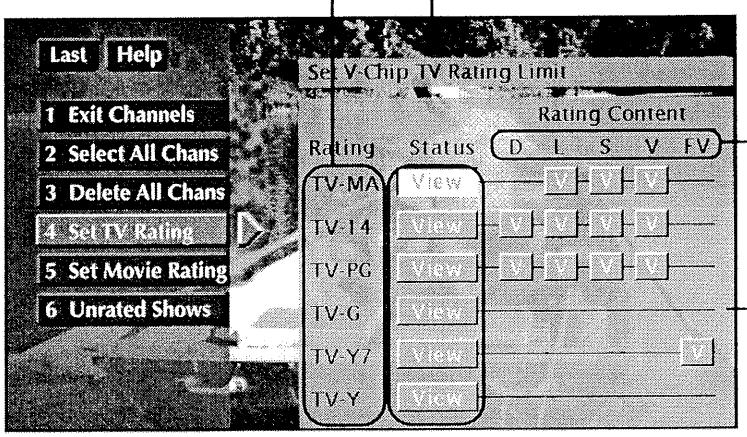
Below is an example of where items are located within the Rating Limit screen.

Age-Based Rating Limit

Lists the available ratings you can block or view with the rating status buttons.

Rating Status Buttons

Lets you know whether the status of the age-based rating limit to the left is View or Block.



Content Themes

Lists the content themes you can block or view with the content status buttons.

Content Status Buttons

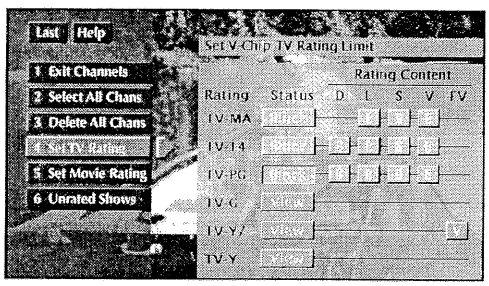
Lets you know which content themes are available for that rating, and whether the status of the content theme is View (V) or Block (B).

BLOCKING AGE-BASED RATINGS

You can automatically block all program ratings above a specified age-based rating level. For example, if you only want your child to watch programs that have a TV-G rating and lower (in other words, you want the child to watch only TV-G, TV-Y7, and TV-Y programs), then you need to block other programming with higher ratings.

To block programs with higher ratings:

1. First, determine the lowest level rating you do not want the child to watch.
2. Highlight the rating status button that corresponds with the lowest rating you do not want the child to watch. (In the example above, you would point to the rating status button corresponding to TV-PG, since the highest rating you want her to watch is TV-G.)
3. Press SELECT to change the button from *View* to *Block*. The status for this and all higher ratings automatically change to *Block* (and *B*).



Changing the TV-PG rating status button from View to Block causes the buttons for the higher ratings and content to change to Block and B.

4. Press the left arrow button on the remote control to return to the menu.

When you change the status of a rating to *Block*, the system will automatically block higher ratings and all corresponding content themes.

Hierarchy of Age-Based Ratings

TV-MA	Mature Audience Only
TV-14	Parents Strongly Cautioned
TV-PG	Parental Guidance Suggested
TV-G	General Audience
TV-Y7	Directed to Children 7 Years and Older
TV-Y	All Children

Viewing Age-Based Ratings

After you block age-based ratings, you have the option of going back and changing some of the ratings to *View*.

1. Determine the rating you want to view that is currently blocked.
2. Use the arrows on the remote control to highlight the rating status button, such as TV-14, whose status is *Block*.
3. Press SELECT to change the status to *View*. Your child would then be able to watch all programs with a TV-14, TV-G, TV-Y7, and TV-Y rating.

   Note that the content theme buttons corresponding to TV-14 change to *View* as well. They and the age-based rating status buttons are the only buttons that automatically change back to *View* when you complete this process.

Blocking Specific Content Themes

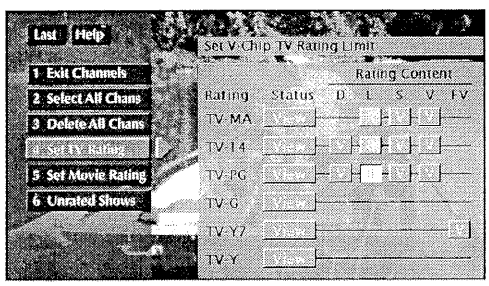
You can block programs based on their content. (Content is represented by the D, L, S, V, and FV on your screen. See "Setting the TV Rating" for details.) When you block a content theme for a particular rating, you automatically block that content theme for higher rated programs as well.

For example, if you do not want your child to watch programs that have adult language (L) rated TV-PG or higher, you need to block adult language in all programming rated TV-PG and above.

Content Themes	
D	Sexually Explicit Dialogue
L	Adult Language
S	Sexual Situations
V	Violence
FV	Fantasy Violence

To block program content:

1. Determine the lowest level of content you do not want the child to watch.
2. Highlight the content button that corresponds with the lowest content you do not want the child to watch. (In the example above, you would highlight the *V* button located under the L and to the right of TV-PG.)
3. Press SELECT to change the button from *V* to *B*. All higher ratings' language content theme button will automatically change to *B*.



Selecting the content theme button corresponding with adult language (L) and TV-PG blocks all programs with adult language (L) rated TV-PG and higher.

4. Press the left arrow to return to the menu or exit the screen.

Viewing Specific Content Themes

After you block specific content themes, you have the option of going back and changing some of the content themes back to View (V):

You must remember to lock the system for rating limits to take effect.

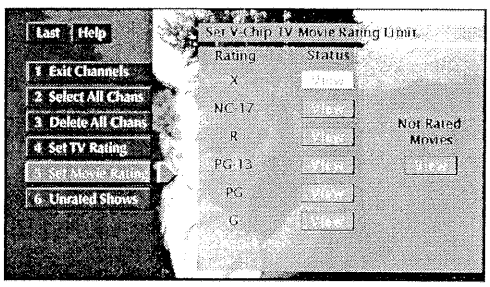
1. Determine the content themes you want to change to View (V).
2. Use the arrows to highlight a particular content button, such as the *B* under language (L) corresponding with TV-14.
3. Press SELECT to change its status back to *V*. Your child would then be able to watch programs with TV-14 adult language content, but not programs with TV-PG or TV-MA language content.

   Note that only the content theme status button corresponding to TV-14 language (L) changes to View (V). Higher rated content theme buttons, such as that for TV-MA language, do not change.

SETTING THE MOVIE RATING

You set movie rating limits by blocking movies rated above a specified level. To access the Set Movie Rating menu:

1. From the main menu, select *Profiles*.
2. Select the user you for whom you would like to set limits.
3. Select *TV Setup* from the next menu.
4. Select *Set Movie Rating*.



Selecting Set Movie Rating allows you to set a limit for movies based on rating.

Please note that the rating limits you set while in the TV Setup menu apply only to TV programs—they do not apply to DIRECTV programs.

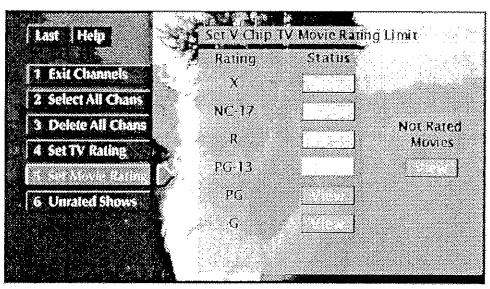
To set limits for DIRECTV programming, select a profile, select *SAT Setup* and then select *Set Rating Limit*.

Blocking Movie Ratings

If you only want your child to watch movies that have a PG rating and lower (in other words, movies rated PG and G), then you can automatically block out all other movies with higher ratings.

To block movies:

1. Determine the lowest level rating you do not want the child to watch.
2. Highlight the rating status button corresponding to the lowest rating you do not want the child to watch. (In the example above, you would highlight the rating status button corresponding to PG-13, since the highest rating you want the child to watch is PG.)
3. Press SELECT to change the button from *View* to *Block*. All higher ratings' *View* buttons will automatically change to *Block*.



Change the button from View to Block and all higher rated movies will also be blocked.

4. Press the left arrow to return to the menu or exit the screen.

You must remember to lock the system for rating limits to take effect.

Viewing Moving Ratings

After you block movie ratings, you have the option of going back and changing some of the rating status buttons back to View:

1. Determine the movie ratings you want to change to *View (V)*.
2. Use the arrows to highlight the status button you want to change.
3. Press SELECT to change its status back to *View*.

   For example, if movies with a rating of PG-13 and higher are blocked, you can change the rating status button corresponding with NC-17. Your child would then be able to watch all movies with a G, PG, and NC-17 rating.

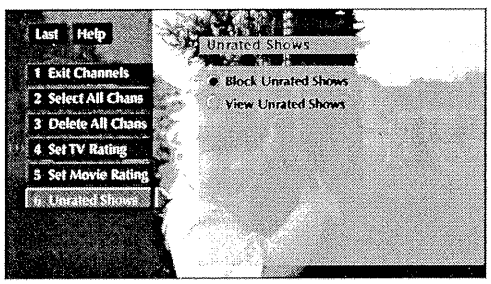
Some movies may be given a "Not Rated" rating. After blocking movie ratings, you must separately set "Not Rated Movies" to View to see these movies.

BLOCKING UNRATED TV SHOWS

Some TV programming is not rated and may contain material you do not want your children to see. These shows must be blocked separately.

To block unrated shows:

1. Select the user you would like to set limits for through the Profiles menu.
2. Select *TV Viewing*.
3. Select *Set TV Rating*.
4. Now select *Unrated Shows*.
5. Highlight the radio button beside your choice of *View Unrated Shows* or *Block Unrated Shows* and press SELECT to select it.



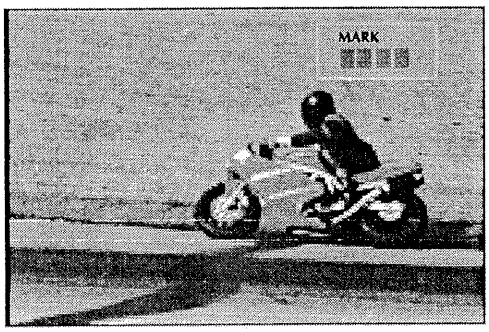
Selecting Unrated Shows allows the user to view or block all unrated programs.

Note that "unrated" TV shows may include news, sports, political, religious, local and weather programs, emergency bulletins, public announcements, and programs sent without ratings. It could also include programs whose ratings are either "None" or "N/A."

CHOOSING YOUR PROFILE

Each time you turn on the TV, the Family profile is selected by default. To select a different profile:

1. Press the USER button to scroll through the profiles in the channel banner.



The WHO button toggles through the profiles.

2. When your profile appears, enter your four-digit personal password to access your profile. If the profile is not password protected, you can just press SELECT to activate it.

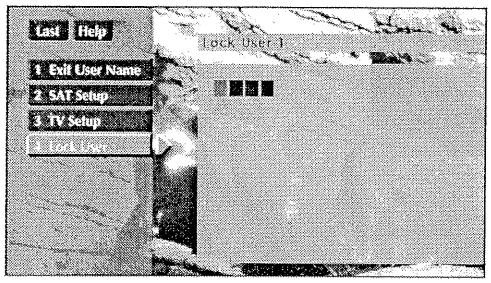
The channel, spending, ratings and viewing limits associated with the chosen profile will be active only when the system is locked.

LOCKING AND UNLOCKING A USER PROFILE

When you lock a profile, you prevent anyone who does not know the user password from accessing the locked profile. This applies only when they press USER on the remote control. It does not prevent them from accessing and editing the profile via the main menu if they first enter the system password.

When you lock a profile (excluding "Family"), you lock its channel limits, rating limits, and spending limits. After locking the profile, you need to enter the system password to edit these settings.

1. Choose the profile you want to lock or unlock from the Profiles menu, highlight *Lock User* or *Unlock User,* and press SELECT.



Locking the user profile protects the limits you set up.

2. When locking a user, use the arrows or the digits on the remote control to enter a four-digit user password.

Some other things to remember about locking and unlocking profiles are:

- For a lock to be effective, you must exit out of the menu system.
- When you attempt to access a profile's channel that is blocked by one or more limits and the system is locked, you will be asked to unlock the video by entering the SYSTEM password.
- If you enter the system password to override a limit, the lock on the channel banner will change to Temp Unlocked, and all limits are temporarily unlocked until you turn off the television. When you turn on the television again, the system will be locked, and the Family profile channel list will be active. If you want to re-lock without turning off the television, you can select the lock icon in the channel banner.
- If a profile is locked and you want to access its channels, press USER on the remote control and then enter the user password.
- If a profile is locked and you want to access its settings, you can access it through the menu system by choosing *Profiles*, then choosing the profile name. Then enter the system password.

Don't Forget Your Password

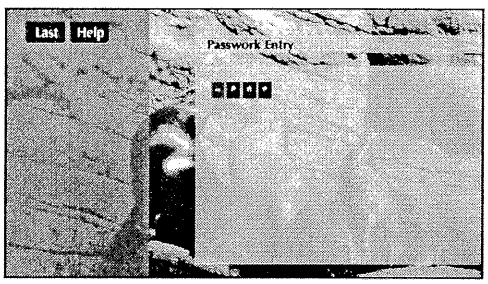
If you forget a USER password and the system is locked, you need to unlock the system and then assign a new user password. If the system is not locked, select *Profiles* from the main menu, choose *Unlock User,* and enter a new password.

LOCKING THE SYSTEM

When you lock the system, all limits set up for all profiles are put into effect, regardless of whether the profile is locked or unlocked. Unlocked profiles require no user password to access their channel list if the system is locked.

When the system is locked, you can still access a profile and watch a channel in its channel list (if the profile is locked, however, you must have the user password). Locking the system activates all rating, spending, viewing, and channel limits for all profiles. When you lock the system, no one can modify any of these settings without first entering the four-digit system password.

1. Select *Profiles* from the main menu. Then select *Lock System* and press SELECT. Or, press INFO on the remote control and select UNLOCKED from the channel banner.



You can lock the system via the channel banner by entering a password.

2. Use the arrows or the digits to enter a four-digit system password.
3. Enter the password a second time to confirm it.

For the changes to be effective, you must exit out of the menu system.

UNLOCKING THE SYSTEM

When the system is unlocked, the channel, spending, viewing, and ratings limits that you set are no longer in effect. To unlock:

1. Highlight *Unlock System* in the Profiles menu and press SELECT.
2. Highlight *Yes* and press SELECT to confirm that you want to unlock the system.

When you attempt to access a channel that is blocked by one or more limits and the system is locked, you will be asked to temporarily unlock the system by entering the four-digit system password.

If you enter the system password to override a limit, all limits are unlocked until you turn off the TV. When you turn on the TV again, the system will be locked, and the Family profile channel list will be selected. If you want to re-lock the system without turning off the TV, you can select unlocked in the channel banner.

LOCKED/UNLOCKED in the channel banner are an easy way to lock or unlock the system. Press INFO and select LOCKED/ UNLOCKED to change the lock status.

- *UNLOCKED* The system is unlocked. Spending, viewing and other limits can be accessed and changed.
- *TEMP UNLOCKED* A password has been entered to override family or profile limits. No limits can be accessed or changed without a password.
- *LOCKED* Limits cannot be accessed or changed without the password and all limits are in effect.

If you subscribe to DIRECTV® programming and forget the SYSTEM password, contact your satellite program provider's authorization center.

If you forget the system password and do not have DIRECTV, remove the access card from the TV's back panel (store it in a safe place, or reinsert it upside down to store it in the TV). Press and hold the INFO button on the front panel; simultaneously press and hold the USER button on the remote control. Continue to hold for three seconds. All passwords will be cleared.

SYSTEM OPTIONS AND PREFERENCES

This chapter describes the other options available to you such as:

- selecting a signal source and type
- auto link to tune to the VCR1, VCR2, or DVD channel
- searching for all available channels
- checking your mailbox
- purchasing programs
- setting up system preferences

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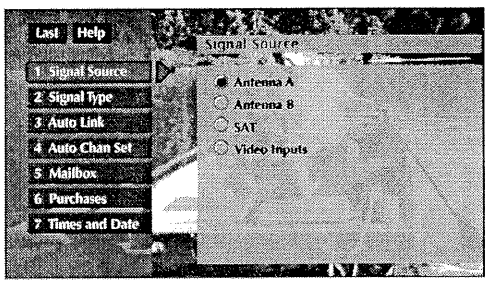
CHANGING THE SIGNAL SOURCE

The Signal Source menu allows you to choose the source from which you would like the signal to come: Antenna A, Antenna B, or SAT or Video Inputs. The same can be accomplished using the DTV/SAT, ANT, and INPUT buttons on your remote control. If you misplace your remote control, use the front panel buttons to access this menu and change the signal source.
To access the Signal Source menu:

1. Press MENU on the remote control to access the main menu.
2. Select *System Options* from the main menu.
3. Select *Signal Source* from the next menu.

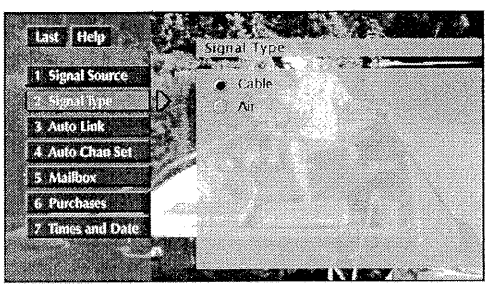


Select the appropriate signal source.

4. Use the arrows and SELECT to select which source from which you would like to receive a signal.

CHANGING THE SIGNAL TYPE

The Signal Type menu lets you choose whether you are receiving a signal from cable TV or an off-air antenna. When you run Channel Search (see "Channel Search" in this section for details), the TV automatically detects your signal and you don't have to specify it here. However, if you decide to change the source, you will need to use the Signal Type menu. Note that if your signal source is coming from DIRECTV, this menu will not be available.

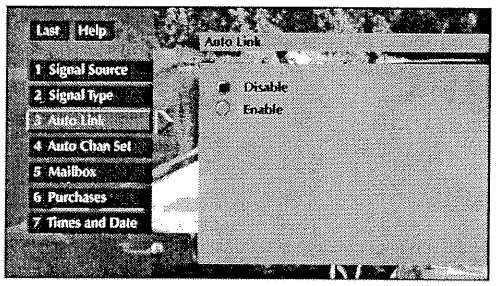


Select whether you are receiving signals from an off-air antenna or cable.

AUTO LINK

This menu displays the various components you have connected to your TV. It lets you set up the TV to automatically turn on and tune to the correct input channel, when a VIDEO input is selected.

1. Use the arrow keys on the remote control to highlight Disable or Enable.



2. Press the SELECT button on the remote control to select to Disable or Enable this feature.

When Enable is selected, the TV will turn on and tune to VIDEO:1,2,3, or 4 automatically, when a VIDEO:1,2,3, or 4 input is detected. This is convenient when you want to watch a movie with your VCR, laserdisc player, or DVD player.

Select Disable to turn this function off.

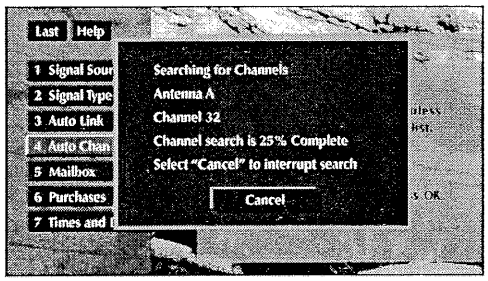
NOTES: Once the TV has been turned on using the Auto Link feature, it must be reset before Auto Link is used again. To do this, turn your VCR, laserdisc, or DVD player OFF. This feature is now reset and will turn on your TV as described above.

AUTO CHAN SET

Engaging in a channel search tells the TV to search automatically for all the terrestrial TV channels available through the Antenna A and B inputs. When the TV finds an active channel, it places it in the channel list. Inactive channels (weak stations or channels with no signal at all) will not be placed the channel list.

You can edit the channel list and remove unwanted channels by using the Profiles menu.

Please note that because channel search will search for both digital and analog TV channels on all antenna inputs, the process may take many minutes.



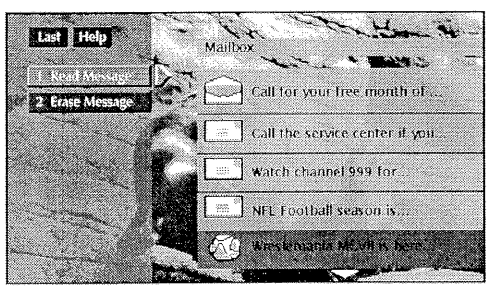
Running channel search collects all available channels in a channel list.

MAILBOX

If you have ordered DIRECTV® programming, the mailbox shows you messages that are sent—or "mailed"—from your program providers. For example, you may receive a message calling your attention to a new service or special program offering. If you have new or unread mail, the mail item in the channel banner is highlighted.

CHECKING YOUR MAIL

1. Select *Mailbox* from the System Options menu or MAIL from the channel banner to view your mail.
2. Highlight a message and press SELECT. The message opens for you to read.
2. Press SELECT again to close the message.
3. If you want to erase a message, highlight *Erase Message* and press SELECT. When you exit the display screen, messages not erased are saved in memory.



Mail provides the latest information from program providers.

PURCHASES: PAY PER VIEW PROGRAMS

Pay per view* (PPV) programs are DIRECTV programs that you purchase—like a movie ticket—on an event-by-event basis if you subscribe to DIRECTV® programming. Pay per view programs are labeled "PPV" in the DIRECTV program guide. A channel labeled PPV could run nothing but previews for movies. After previewing the movie, you can purchase it or find out more details about it.

PURCHASING AND PREVIEWING

There are several ways to purchase and preview DIRECTV pay per view movies and events if you subscribe to DIRECTV:

- Tune to a pay per view program's channel. Program providers may offer on-screen purchase instructions, usually as the pay per view program begins.
- Highlight a pay per view program from the program guide and press INFO.
- Preview a coming attraction by selecting a channel from the Attractions Guide.

TUNING TO A PAY PER VIEW PROGRAM

When you use the channel up and down buttons or digits on the remote control to tune to a pay per view channel, you need to press the INFO button to bring up the Program Details screen in order to purchase a program.

Use the program guide to get to the Program Details screen.

* To order pay per view programming by remote, a DIRECTV subscription is required (except NFL Sunday ticket™ and premium a la carte movie channels) and the DIRECTV PLUS System receiver must be continously connected to a land-based phone line.

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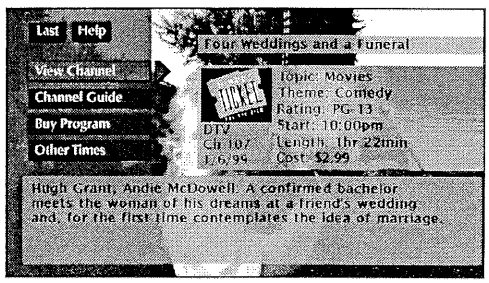
You may need to enter your four-digit system password to order a PPV program if it costs more than the spending limit you set up in the Profiles menu.

USING THE PROGRAM GUIDE FOR PAY PER VIEW PROGRAMS

Another way to get to the Program Details screen is by using the DIRECTV programming guide (if you subscribe to DIRECTV). Press DTV/SAT on the remote control until SAT is highlighted in the channel banner, then press GUIDE. Highlight a program name in the DIRECTV programming guide and press INFO.



The Program Details screen gives you several options.

You can select:

- *View Channel* to tune to that channel
- *Channel Guide* to see a program lineup for that channel
- *Buy Program* to purchase the program
- *Other Times* to see what other times the program is available

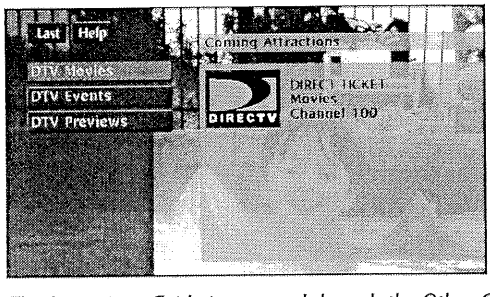
The options available to you may vary according to the type of program you select.

You need to connect your phone line to your television to be able to order PPV programs using the on-screen menus.

USING THE ATTRACTIONS GUIDE

Your program providers may offer future programming events not currently listed in your DIRECTV program guide. These events are called "coming attractions" and can be previewed in the Attractions Guide. To access the Attractions Guide:

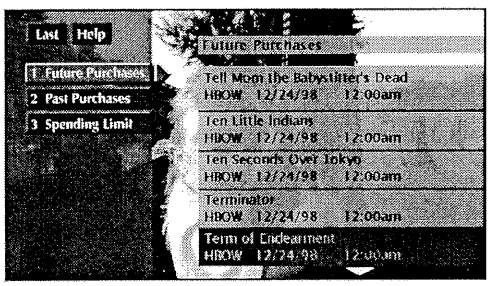
1. Press the DTV/SAT button on the remote control until SAT is highlighted in the channel banner. Then press GUIDE.
2. Use the down arrow icon to move the highlight to the bottom of the screen.
3. Select *Other Guides*.
4. Select *Attractions*.
5. Select a channel.



The Attractions Guide is accessed through the Other Guides menu.

USING THE PURCHASES MENU

The Purchases menu allows you to review upcoming and past DIRECTV pay-per-view purchases.



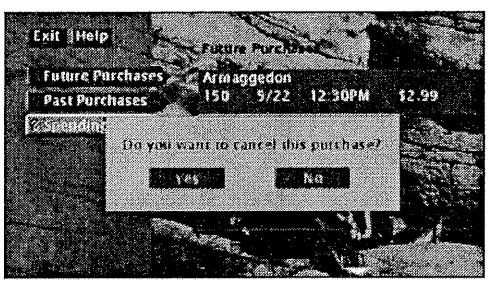
The Purchases menu shows you upcoming or past DIRECTV purchases and spending limits.

The list of purchases may be longer than one screen; use the down arrow button on the remote control to see more items. The display also shows the title, channel, date, time, and cost of each program.

- Note that the past purchases list might not be updated until the end of the billing cycle and therefore may show purchases for which you have already paid.

REVIEWING AND CANCELING AN UPCOMING PURCHASE

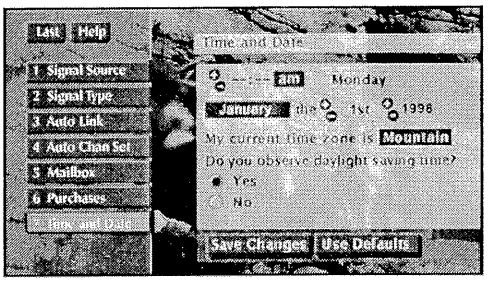
You can review the program description, as well as cancel an upcoming purchase. Highlight an upcoming purchase from the DIRECTV Future Purchases screen and press SELECT.



The Future Purchases screen lets you cancel an upcoming purchase.

SETTING THE TIME AND DATE

You can set the current time and day, the current date, the time zone, and whether or not you observe daylight saving time.



Indicate the settings for your area.

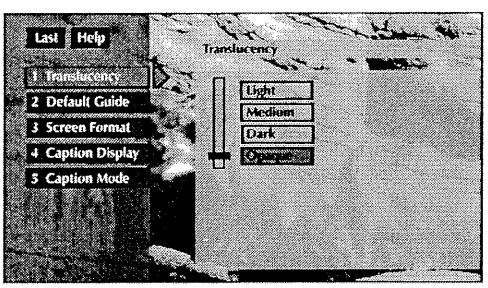
Use the arrow buttons to move around the menu screen, SELECT to select an item, and the digit buttons on your remote control to enter numbers. If you have already acquired a digital signal, the time was automatically set and you cannot reset it.

USING THE PREFERENCES MENU

The Preferences menu allows you to change some aspects of your TV to fit your personal preference. The following sections outline what you can do in this menu.

TRANSLUCENCY

You can adjust the level of translucency that the menu screens and program guides possess. Adjust the slider up for more translucency (the video behind the menu and guides will be more visible) or down for less translucency (less video will be shown behind the menu or guides).



SYSTEM OPTIONS AND PREFERENCES

DEFAULT GUIDE

By default, the Detail Guide appears when you press GUIDE on the remote control, no matter if you access the DIRECTV® programming guide or the TV guide. You can change the default guide from the Detail Guide to the Grid Guide or SurfGuide (DIRECTV only).

1. Select *Preferences* from the main menu, then select *Default Guide*.
2. Use the arrows and SELECT to choose which guide you want to appear first when you press the GUIDE button on the remote control.

For more information about the three types of guides, see the section, "Using the Program Guides."

SCREEN FORMAT

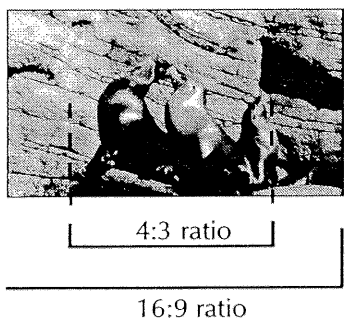
If you receive an image with a 4:3 aspect ratio, the image will be displayed at that ratio on your HDTV unless you specify otherwise. The Screen Format menu allows you to adjust the image through the following options:

Normal Choose this when receiving a 4:3 image and you want the on-screen appearance of the video to be a centered picture with side panels (blank areas) on the right and left sides.

Full Choose this when you want the television to adjust the 4:3 image horizontally so it fills your 16:9 screen. No side panels will be added, and the image is vertically unaltered. This setting is especially useful for viewing 16:9 formatted DVDs.

Fill Choose this when receiving a 4:3 image and you do not want side panels on the right and left sides of the screen. The television will adjust the image both horizontally and vertically so it fills the height and width of your 16:9 screen with no side panels added. It will also maintain the correct image proportion. Use with material such as "letterboxed" laserdiscs or VCR tapes.

Smooth Wide Choose this when receiving a 4:3 image and you do not want side panels on the right and left sides of the screen. The television will proportionally adjust the image horizontally so it fills your 16:9 screen with no apparent distortion or side panels added.

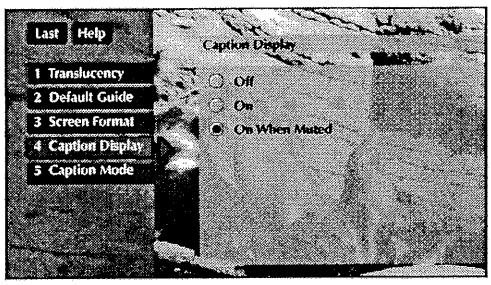


Some digital (ATSC format) stations may transmit 4:3 images in a way that will not allow expansion. You will be unable to adjust the screen format.

If Magic Focus is activated while in Normal/Full/Fill mode, the convergence will be corrected for all three of these modes automatically. You must activate Magic Focus again, while in Smooth Wide mode, for convergence to be corrected for this mode.

CAPTION DISPLAY

The Caption Display menu displays a choice list that lets you choose when closed captioning information is shown on the screen.



Off No captioning information is displayed.

On Captioning information is shown always, when available.

On When Muted Captioning information is only shown when the TV's sound is muted, when available. (To mute the sound, press the MUTE button on the remote control.)

CAPTION MODE

You can also select a closed caption mode, which is the mode, or source, used for displaying captioning information. The content of CC and Text are different; you can select which one you want to see on the screen.

- CC displays information at any position on the screen. It overlays the text on top of the picture as it is received.
- Text displays information at one particular position (such as the bottom third) of the screen. You cannot see the picture underneath the text.

You can choose between eight closed caption modes, or sources:

- **CC1 and Text 1** are the primary caption and text services. The captioning or text is displayed in the same language as the program's dialog.
- **CC3 and Text 3** serve as the preferred data channels. The captioning or text is often a secondary language translation, simplified English, or displayed at a slower rate.
- **CC2** and **CC4** and **Text 2** and **Text 4** are rarely available and broadcasters use them only in special conditions, such as when CC1 and CC3 are not available, or Text1 and Text3 are not available.

GETTING ASSISTANCE

If you run across any problems or need to rely on the system to give you feedback, you should use the Assistance menu to get information. This section explains the different types of assistance your system is capable of giving you. It walks you through the Assistance menu, which is accessed by pressing MENU then selecting *Assistance*.

This section:

- tells you about the interactive setup process
- helps you get antenna and signal meter information
- explains the on-screen signal meter
- tells you how to validate a new access card
- describes how to use the system test

Most of the screens contain information to help you decide what to do next. If you get stuck, look for the help text at the bottom of the screen.

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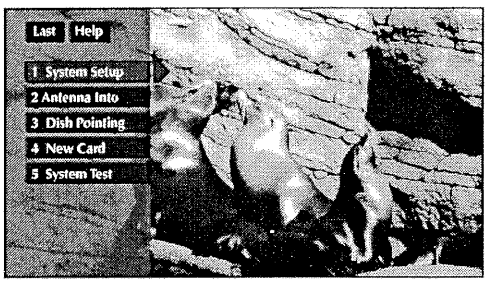
RUNNING THE SYSTEM SETUP

You should have completed the system setup the first time you plugged in your TV. However, if you need to access the system setup again, you can access it through the Assistance menu.

1. Press MENU on the remote control to access the main menu.
2. Select *Assistance* from the main menu.
3. Select *System Setup* and follow the on-screen directions.



The system setup process allows you to complete all steps or selectively skip steps.

The steps involved in the interactive setup include:

- Setting the time and date
- Searching for channels
- Setting up speakers
- Selecting an audio processor
- Specifying your satellite dish antenna type
- Running the system test

Note that if you do not subscribe to DIRECTV® programming, you can select "Skip this step" for specifying satellite dish antenna type and running the system test.

GETTING ANTENNA INFORMATION

The Antenna Info menu helps you measure the strength of all available TV channels. It will help you adjust any terrestrial TV antennas. (The actual adding of channels is done by using the Auto Chan Set menu.)

To access the Antenna Info menu:

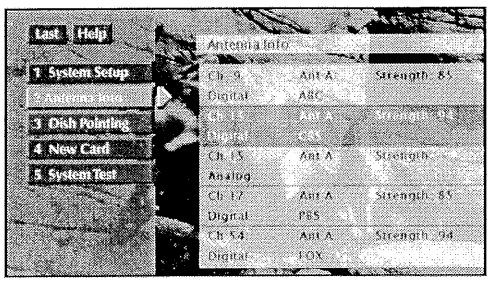
1. Press MENU to bring up the main menu.
2. Select *Assistance*.
3. Then select *Antenna Info*.

A dialog box reports the status of the signal search and lists channels that are being received or have been received from all terrestrial antennas. To switch between antennas, highlight any channel and then press ANT on the remote control.

When getting antenna information, the screen lists:

- the channel number,
- the station name, if available,
- whether the channel is digital or analog,
- which antenna is receiving the signal, and
- if a digital channel, the current signal strength.

Note that if you highlight a channel in the Antenna Info menu, you tune to the channel and, if digital, get a real-time update of the signal strength.

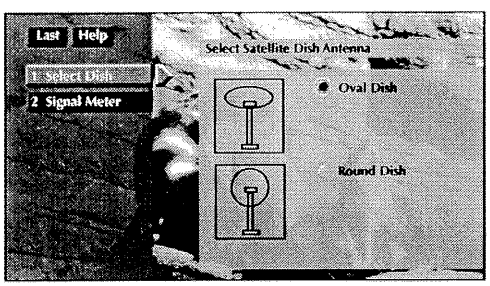


The channel list consists of all channels being received or that have been received from terrestrial antennas.

THE SELECT DISH MENU SCREEN

To specify the type of dish you are using:

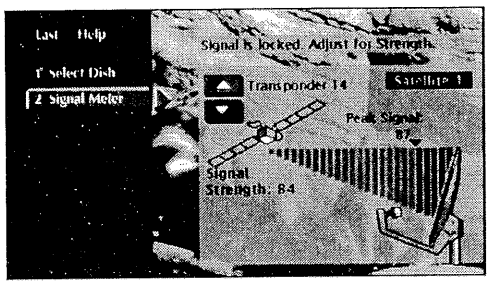
1. Press MENU on the remote to bring up the main menu.
2. Select *Assistance,* then *Dish Pointing,* then *Select Dish.*
3. Specify the type of dish you are using.



USING THE ON-SCREEN SIGNAL METER

The signal strength meter is used to determine whether you are receiving the DIRECTV signal; it also indicates the strength of the DIRECTV signal once the signal is acquired. Follow these steps to bring up the on-screen signal meter:

1. Press MENU on the remote to bring up the main menu.
2. Select *Assistance* then *Dish Pointing*.
3. Select *Signal Meter*.



If the dish is pointed correctly, the signal meter will show you the current signal strength (and you should hear a continuous tone).

4. Use the arrows and SELECT button on the remote control to toggle between the satellites. Try to achieve the peak signal for each.

Peak Signal

The "Peak Signal" indicates the highest signal strength you have obtained, which is not necessarily the highest possible signal.

While the maximum signal strength is 100, the signal strength you achieve will probably be less. Although there is no difference in picture quality between signal strengths of 60 and 85, the higher the signal, the less likely you are to experience negative effects in degraded conditions such as rain or snow (called "rain fade").

YOUR NEW ACCESS CARD

Periodically, your program provider may issue you a replacement access card if you subscribe to DIRECTV. The New Card Setup screen allows you to transfer the information from the old card onto the new one. The access card fits into the TV through the back panel.
To replace the card:

1. Select *Assistance* from the main menu.
2. Select *New Card*.
3. Follow the on-screen directions to validate the new card.

See the section "Setup and Connections" for details about where to insert your access card.

RUNNING THE SYSTEM TEST

The System Test display screen is accessed through the Assistance menu and allows you to initiate diagnostic procedures on the DIRECTV System, if you subscribe to DIRECTV. You should use this feature to get your access card number or when your television doesn't seem to be receiving satellite signals correctly.

A message screen appears when you select *System Test* from the Assistance menu. This screen tells you whether the system passed each test. If your system fails the test, run the system test several times before concluding that there is a problem. Occasional fluctuations in the phone line or satellite signal can give temporary false readings. Note that if you do not subscribe to DIRECTV or do not have your satellite dish antenna installed, the test will fail.

REFERENCE

This section contains troubleshooting information, Hitachi Service Hotline information, and accessory information.

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TROUBLESHOOTING

Can't select certain channel

- Channel may be blocked or not approved in the Profiles menu.
- If using a VCR, check to make sure the TV/VCR button on the VCR is in the correct "mode."

Noisy stereo reception

- May be a weak station. Change to mono mode instead of stereo in the Audio menu under Special Audio.

No picture, no sound but TV is on

- Maybe a vacant channel or input is tuned.
- If watching VCR (connected only through antenna input), make sure TV is tuned to channel 3 or 4 – same as CH3/4 switch on VCR. Also check to make sure the TV/VCR button on the VCR is in the correct "mode."

Sound okay, picture poor

- Check antenna connections and pointing and also check for interfering sources.
- Try adjusting the picture quality, especially sharpness, to improve weak signals.

Black box appears on the screen

- Captioning may be turned on. Check the Caption Display in the Preferences menu.

Wrong picture

The TV and most VCRs let you toggle between pictures: one can be the picture from DIRECTV signal or a terrestrial antenna (or cable) and one can be from the VCR. If you don't see the picture you think you should be seeing, try using these buttons to toggle between the pictures:

- Press the TV/VCR button on the VCR remote or on the VCR's front panel.
- Press the ANT button on the remote control.

Taking either of these actions lets you switch the source of the video signal from DIRECTV to the off-air antenna or cable, and vice versa.

Problems with the remote control

- Maybe something is between the remote control and the remote sensor on the front of the TV.
- Maybe the remote control is not in the correct mode. Press the TV button so the remote will be in TV mode and can control your television.
- Maybe the batteries in the remote control are weak, dead or installed incorrectly. Try replacing batteries. (Note, if you remove the batteries, you may have reprogram the remote to control other components.)

Blank screen

- Maybe the component (VCR, DVD, etc.) connected to the input jacks is not on.
- Try another channel, because there may just not be any programming on at that time.
- Cables in back may be disconnected.

TV will not turn on

- Check to make sure it is plugged in, and try the front panel POWER button.
- Check the wall receptacle (and extension cord, if applicable) to make sure it is "live" by plugging in something else.
- Maybe batteries in remote control are "dead."
- Maybe remote control is not aimed at remote sensor.

TV turns off while playing

- Electronic protection circuit may have been activated because of a power surge. If this happens frequently, the voltage in your house may be abnormally high or low. When this happens, please follow this procedure:
  1. Press the power switch (ON/OFF) once.
  2. If there is still no power, wait 30 seconds and press the power switch again.
  3. If there is still now power, unplug the power cord from the wall. Wait 30 seconds and plug the power cord back in. Press the power switch again.

Problems with your system password

- If you forget your system password and subscribe to DIRECTV® programming, you should call DIRECTV to obtain a new one.

CARE AND CLEANING

CAUTION: Turn OFF your TV before cleaning.
You can clean the TV as required, using a soft lint-free cloth. Be sure to occasionally dust the ventilation slots in the cabinet to help assure adequate ventilation.

The TV's screen may be cleaned with a soft, lint-free cloth as well. Take care not to scratch or mar the screen. If necessary, you may use a cloth dampened with warm water.

Never use strong cleaning agents, such as ammonia-based cleaners, or abrasive powder. These types of cleaners will damage the TV.

While cleaning do not spray liquid directly on the screen, or allow liquid to run down the screen and inside the TV. Also, avoid placing drinks, vases, or potted plants with water on top of the TV. This could increase the risk of fire or shock hazard or damage to the TV.

Caution: If fixed (non-moving) images are left on the screen for long periods, they may be permanently imprinted on the screen. Such images include network logos, phone numbers, and video games. This damage is not covered by your warranty. Extended viewing of channels displaying these images should be avoided.

HITACHI

service hotline

To locate an authorized HITACHI service facility in the continental U.S.A. and Canada,

DIAL TOLL FREE

7 days a week, 24 hours a day

800 HITACHI

(1-800-448-2244)

Hitachi America, LTD.
Home Electronics Division

Hitachi has made every effort to assure you hours of trouble free operation from your unit. However, should you require service, a network of Hitachi Authorized Service Facilities has been established in all 50 states and Puerto Rico. Each facility will provide you with convenient and expedient assistance. Our service hotline operator will direct you to the Hitachi Authorized Service Facility nearest you. Just present proof of purchase and/or delivery receipts to the Hitachi Authorized Service Facility, and service will be rendered in accordance with the terms of the limited warranty as stated on your warranty card or operating guide.

Should you have any questions regarding warranty, service, operation, or technical assistance, please contact:

Hitachi America, LTD.
Home Electronics Division
1855 Dornoch Court
San Diego, CA 92154

In Canada, please contact: 1-800-HITACHI
(1-800-448-2244)

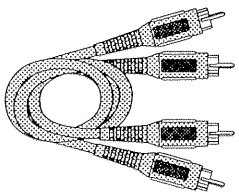
HITACHI (HSC) Canada Inc.
6740 Campobello Road
Mississauga, Ont. L5N 2L8

ACCESSORY INFORMATION

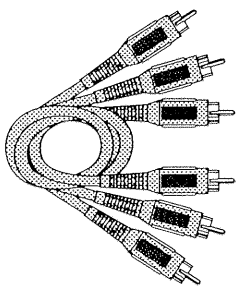
The following accessories are available from most dealers and electronics supply stores in case you want to position your components farther apart or need additional cables.

Flat 300-ohm twin-lead cable.

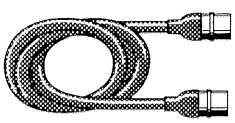
Standard Audio/Video cable with RCA-type phono plugs.



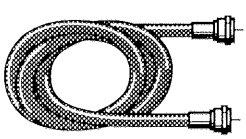
Monaural VCR Dubbing Audio/ Video Cable is a double cable that lets you connect the video and audio jacks of two VHS VCRs to duplicate tapes. It can also be used to connect a VCR to your TV. The cable is color-coded and shielded. It has RCA-type phono plugs on each end.



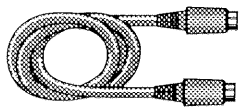
Stereo VCR Dubbing Audio/Video Cable is a triple cable that lets you connect the VIDEO and AUDIO jacks of stereo components.



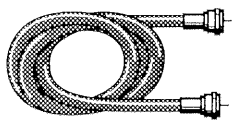
Push-on Cable* attaches to the round antenna connectors (called 75-ohm F-type) on the back of your VCR or TV. The ends push on for a quick connection.



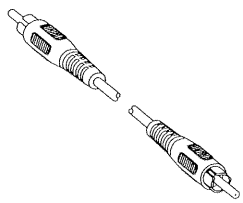
Screw-on Cable* attaches to the round antenna connectors (called 75-ohm F-type) on the back of your VCR or TV. The ends screw onto the connectors for a secure connection.



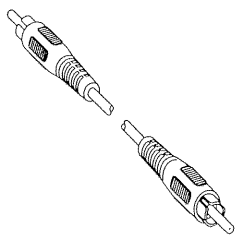
S-Video Cable has multi-pin connectors on each end for connecting S-Video components to your TV.



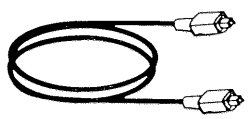
RG-6 Coaxial Burial Cable with weatherproof "F" connectors.



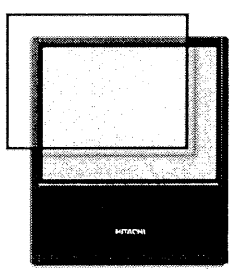
Monaural VCR Dubbing Cable, 6 ft.



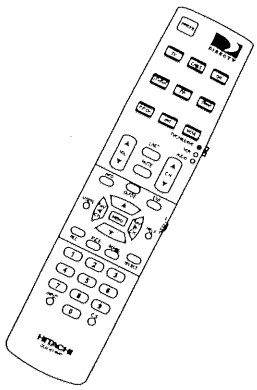
Stereo VCR Dubbing Cable, 6 ft.



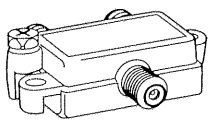
Optical/SPDIF cables help you connect to a component with an Optical Audio In jack, such as a Dolby Digital decoder or receiver.



61" Ultra Shield protects your television screen from fingerprints, scratches, and other unwanted wear and tear.

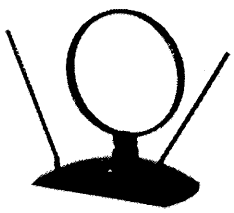


Remote Control This is the remote control that came packed with your TV. Replacements or spares can be ordered as needed.



2-way Splitter
4-way Splitter

2-way Signal Splitter, 4-way Signal Splitter* helps you connect to other components.



Amplified VHF/UHF/FM Antenna allows you to easily switch from the antenna signal to cable or satellite easily without disconnecting antenna.

* This accessory is intended for use with an off-air or cable TV signal distribution and is not suitable for distribution of the satellite signal originating from your satellite dish antenna.

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